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INSIDE DOPE

By GEORGE F. TAUBENECK

Story of the Week

Maybe You Can Sell This
Are We All Going Crazy?
Management Faces Challenge of
Lower Output per Worker

And Dr. Dow
The Summary
Why Corporations
Are Losing Money
Sly Communist Insinuations
One Way to Win
A War in Advance
They Hope that Russia
Wins Over All
Why Men Loaf
Never Underestimate the
Power of a Woman
Planned Confusion

Story of the Week

The reason nobody can claim
authorship of a joke is that the same
humorous situations repeat them-
selves at various places and times.
Fallible human beings just naturally
fall into the same traps, over and
over again.

Example: One of the oldest vaude-
ville minstrel-show gags is this one:
"Gee, ain't the people here tonight
numerous?"

"Yeah, man. And ain't they lots of
em."

At a recent meeting of Detroit's
City Council, a report was read which
noted that a certain municipal park
restaurant had registered a large
profit.

Commented Councilman Charles
Oakman: "They must have a delectable
cuisine."

"Uh-huh," added Councilman Ro-
gell, "and they serve good food, too."

Maybe You Can Sell This

So now we digress to tell you
about a new device known as an
electronic menu selector, which will
enable restaurant customers to get
more rapid and more accurate service
when ordering meals.

Containing relays, a motor, and an
electron tube, the menu selector fea-
tures buttons which may be pressed
by the patron. Within an instant,
orders are punched simultaneously in
the stock-keeper's office, at the chef's
stove, and at the cashier's cage.

In order that stocks may be kept
in an automatic recorder totals the
number of each selection ordered
within a given time.

Are We All Going Crazy?

Every time we pick up a news-
paper we get more confused.

England and Russia are readying
World War III for 1950, and they're
trying to draw us into it, it
seems.

Walter Winchell breathlessly pro-
claims to a panting audience:

"This is the shortest peace in his-
tory." (Succinct summarization, at
least.)

Labor is cutting its own throat,
and at the same time it is slashing
the consumers' jugular vein—by de-
manding too much more pay for far
less work.

Some industrialists also, be it said,
seem to be antediluvian in their
thinking—and certainly a certain di-
rected few of them haven't shown
much evidence of their ability to
make a clear analysis of current
conditions as the latter affect their pub-
lic relations.

Where will it all end?
Are we all going crazy?

Can't fair-play-minded citizens on
both "sides" ever get together?

Shall we give the country back to
the Indians?

Uh-huh. This is just a temporary
phase. As the Bible says, "This, too,
shall pass." America is going onward
and upward because The People are
making up to what's ailing 'em.

Concluded on Page 6, Column 1)

Sears, Roebuck
Freezer Prices Up,
Production Down

CHICAGO — Sears, Roebuck &
Co.'s home freezers are being dis-
played in the firm's Loop store here
at the following prices:

| | |
|-----------------|----------|
| 6 cu. ft. | \$214.50 |
| 12 cu. ft. | 304.50 |
| 18 cu. ft. | 374.50 |

(In the original announcement on
the home freezer line made in Febru-
ary of this year prices were an-
nounced as follows: 6 cu. ft. model,
\$169.50; 12 cu. ft. model, \$244.50;
and 18 cu. ft. model, \$304.50.)

No models were being "sold" how-
ever. Appliance department salesmen
explained that the "plant" for the
production of home freezers was
closed down and wouldn't re-open
until late September or early October.

Persons interested in the purchase
of a home freezer were entering
their name in a book. When the
product becomes available, all such
persons will be notified simultane-
ously, the salesmen said, and the
home freezers will apparently be
delivered on a "first come, first
served" basis.

Lauderall Awaits
Official Ceiling Price

DETROIT—No official price has
yet been set by the Office of Price
Administration on the "Lauderall"
automatic washer manufactured by
the F. L. Jacobs Co. of Detroit.

The Aug. 5 issue of AIR CONDITION-
ING & REFRIGERATION NEWS carried a
story that a retail price of \$272 had
been placed on the Lauderall. This
price had been established tentatively
by the manufacturer during the
period in July when there was no
price control in effect. The passage
of a new price law nullified all price
plans, according to Edward A. Ash,
director of the Jacobs company's
Appliance Division.

Although in production, retail sale
of the Lauderalls is awaiting ap-
proval by the OPA of a price struc-
ture, Mr. Ash declared.

Lauderalls have been manufac-
tured in quantity since June when
550 units were produced at the com-
pany's main assembly plant at
Indianapolis, Mr. Ash said. Produc-
tion schedules called for 3,000 in July,
5,000 in August, and 7,000 in Septem-
ber, with 12,000 a month scheduled
to be manufactured by the end of
the year.

The product is being handled
through 84 distribution points and
5,000 dealers.

REWA Asked to Urge
Manufacturers Supply
Numerical Price Lists

CINCINNATI—Net price lists with
items listed numerically by model or
part number is a suggested solution
for some of the "headaches" in the
present era of constantly changing
prices, offered by A. H. Holcombe,
Jr., of Victor Sales & Supply Co.,
Philadelphia refrigerator parts and
equipment wholesaler.

Mr. Holcombe sounded a call to
members of the Refrigeration Equip-
ment Wholesalers Association to
bring the matter to the attention of
all manufacturers of refrigeration
parts and supplies, and to the repre-
sentatives of such manufacturers.

"Either we have to teach our
counter men to use the slide rule or
we have to provide them with in-
numerable scratch pads to figure out
the cost of each item," Mr. Holcombe
declared. "It seems to me the manu-
facturer could help us considerably
by figuring a net price and furnishing
(Concluded on Page 4, Column 3)

165 Companies
Sign for Space
At Fall Show

CLEVELAND — More than 165
companies have already signed up to
exhibit in the Fourth All-Industry
Refrigeration and Air Conditioning
Exhibition to be held in the Public
Auditorium here Oct. 29 to Nov. 1,
the Refrigeration Equipment Manu-
facturers Association, sponsor of the
show, has announced.

Show managers predict that more
than 300 exhibits will fill the 75,000
sq. ft. of show space available in the
four exhibition halls of the Cleveland
Public Auditorium. Daily time sched-
ule for the show, as announced by
show officials is:

| |
|------------------------------------|
| Tuesday, Oct. 29, Noon to 6 p.m. |
| Wednesday, Oct. 30, Noon to 6 p.m. |
| Thursday, Oct. 31, Noon to 10 p.m. |
| Friday, Nov. 1, 10 a.m. to 4 p.m. |

The show, first since January, 1941,
will be opened to the public on
Thursday from 7 to 10 p.m.

The frozen food equipment industry
will participate in the forthcoming
show on a large scale for the first
time, it was announced. The Frozen
Food Locker Manufacturers and Sup-
pliers Association will cooperate with
R.E.M.A. in sponsoring the show.

Organizations having tentative
plans for meetings in conjunction
(Concluded on Page 24, Column 3)

REMA Membership
Exceeds 100 Firms

MARINETTE, Wis., Aug. 15 — A
year ago on this date, directors of
the Refrigeration Equipment Manu-
facturers Association met here to
observe the tenth anniversary of the
group and wound up by celebrating
the surrender of Japan.

Today at their annual midsummer
meeting here, the directors had still
another reason for enthusiasm. It
was the announcement by H. F.
Spoehrer of St. Louis, Rema presi-
dent, that membership in the organi-
zation now has passed the 100-mark.

The one-hundredth company, voted
into the membership at the meeting,
is Drayer-Hanson, Inc., Los Angeles,
(Concluded on Page 4, Column 3)

Turner Gets New Post
With G-E Air Conditioning

BLOOMFIELD, N. J. — John P.
Turner, Jr., formerly manager of the
Central Sales District for the General
Electric Co.'s Air Conditioning De-
partment with offices in Kansas City,
has been named to the newly created
post of field sales manager for that
same department of G. E., according
to J. P. McIlhenny, manager of
sales, who also announced the ap-
pointment of three other air condi-
tioning department men to new posi-
tions.

(Concluded on Page 4, Column 4)

Fedders-Quigan to Make
Unit Air Conditioners

BUFFALO—Plans to manufacture
unit air conditioners for room cooling
were announced by Frank J. Quigan,
board chairman of the Fedders-
Quigan Corp. here.

In entering this field, Mr. Quigan
stated that production of unit air
conditioners opens up for the com-
pany a wide variety of markets in
offices, homes, and institutions.

Engineering development of the
first of several models has been com-
pleted. Shipments will start early
in 1947, subject to availability of
materials.

OPA 'Informal Opinion' Bars
Prewar Appliance DiscountsCarrier Will Share
Former G-E Turbine
Plant at Syracuse

SYRACUSE, N. Y.—A broad pro-
gram of expansion on the Federal
Government's huge Thompson Road
plant was assured as the result of a
long-protracted decision by War
Assets Administration authorizing
the Carrier Corp. and Syracuse
university to share the site.

Under the agreement, Carrier Corp.
will pay \$4,000,000 on a 10-year
basis and will come into possession
of a big segment of what has been
used by General Electric Corp. as a
turbine generator plant during the
war.

Carrier plans to manufacture large
refrigeration equipment in the plant,
WAA said. The rest of the plant
will go to Syracuse university.

The turbine generator plant which
Carrier will acquire is estimated to
have cost \$7,772,120. Carrier has
agreed to pay \$800,000 cash, \$200,000
(Concluded on Page 4, Column 2)

Wage-Price Ruling
On Contractors Gets
NARC Interpretation

CLEVELAND—With the reinstatement
of OPA, RMPR 165 (governing
wage and price controls for service
shops) again is in operation.

To clarify any existing confusion
among refrigeration contractors as
to the application of this regulation,
the National Association of Refrig-
eration Contractors has issued its
interpretation of the rules as they
now stand.

An employer having eight or less
employees is authorized to raise wages
without approval or without filing
any form with any government
agency, the NARC statement said,
regardless of whether or not he in-
tends to pass on the increase in his
prices. According to information
received by NARC, in a corporation
everyone from the president on down
is counted as an employee. In a
partnership, or sole-owner business
however, all but the partners or sole
owner are counted as employees.

If the employer of eight or less
persons decides to add a wage in-
crease to the customer's hourly rate,
he is required merely to file a state-
ment with his local OPA Board. It
was further stated that such in-
creases may not be made oftener than
once every 30 days.

In the case of a refrigeration con-
tractor having more than eight em-
ployees, NARC officials declared that
if he does not intend to seek price
(Concluded on Page 4, Column 5)

Crider Incorporates,
Names Sales Manager

LIMA, Ohio — Crider Engineering
& Mfg. Co., organized in April to
manufacture single and two-stage
compressors, has been incorporated
as Crider Corp. and has added an-
other officer to its staff, it has just
been announced by T. G. Crider, presi-
dent and general manager of the
firm.

Appointed to the post of sales and
advertising manager is Oliver J.
Kesti, recently Detroit branch man-
(Concluded on Page 21, Column 3)

Crawford Provision Wording
Is Interpreted; Some
Relief Seems Likely

WASHINGTON, D. C.—The appli-
ance distribution business was thrown
into an uproar by published reports
Aug. 14 that OPA would not restore
prewar discounts for distributors and
dealers in refrigerators and other
appliances, as was seemingly required
by the Crawford amendment in the
new Price Control law.

This is what one press report
stated:

"Retail dealers in refrigerators do
not qualify for restoration of prewar
profit margins under the new price
control law, the Office of Price
Administration ruled.

"Furthermore, officials said, this
ruling will also bar adjustments in
the list prices of radios and other
household appliances to benefit deal-
ers whose margins have been
'squeezed' by OPA's wartime ceil-
ings."

However, direct inquiry by the
editors of AIR CONDITIONING & REFRIG-
ERATION NEWS to the OPA head-
quarters in Washington brought the
following explanation from the
agency's Department of Information:

"No order has been issued barring
refrigerator dealers from restoration
of prewar margins.

PREVIOUS ARTICLE CITED

"Your inquiry probably springs
from publication of an informal
opinion apparently given by some-
body in OPA to a newspaper to the
effect that refrigerator dealers do not
qualify for prewar margins under
Section 2, subsection (q) of the
extended Emergency Price Control
Act.

"This informal opinion apparently
is based on OPA reasoning that sales
of refrigerators do not constitute the
principal sales of any retail industry,
which is a condition required before
action can be taken under sub-
section (q).

"It appears likely that a formal
interpretation covering this subject
will be issued soon."

The provision of the new Price
Control law covering discounts re-
quires OPA to allow a retail trade
its prewar profit margins if its prin-
cipal sales in the years 1939-1941
consisted of a commodity or com-
modities which were produced at
only 25% or less of the prewar level
of production during the three years
beginning March 2, 1942.

VARIOUS PRODUCTS SOLD

The "informal opinion" by OPA
apparently holds that most refrigera-
tors and household appliances are
sold by department stores or dealers
whose principal sales consist of many
different types of products.

Automobile dealers (whose margins
have already been restored by an
average increase of 7.3% in retail
price ceilings) sell little else besides
automobiles, OPA contends, and are
therefore qualified under the Craw-
ford amendment.

If OPA makes its "informal"
opinion stick on the Crawford amend-
ment, distributors and dealers may
gain some relief from another section
of the law which says that "in estab-
lishing maximum prices applicable to
wholesale or retail distributors, the
Administrator shall allow the aver-
age current cost of acquisition of any
commodity, plus such average per-
centage discounts or markup as was
in effect on March 31, 1946."

This would help out on refrigera-
tors and electric ranges, both of
which were subject to some cost
absorption in price increase after
March 31, but wouldn't help much on
washers or radios. (See story
page 24.)

**Don't Miss
the 1946
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**The only COMPLETE
MANUAL & DEALER GUIDE
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More than 900 Photographs—
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Where's the tail on this thing, Thermo?

Tail? Oh, you mean feeler bulb. Scruffy, you'll never see a tail on a Tenney TS-1.

Very true, a Tenney TS-1 Thermostatic Expansion Valve is the only one without a feeler bulb. There's no long list of "do's" and "don'ts" to confuse service men. Just hook it into the lines and operate.

Send for Bulletin TV46

TENNEY ENGINEERING, INC.
26 Avenue B - New York 5, N. Y.
Telephone Bklyn 8-3905
Manufacturers of Automatic Temperature, Humidity and Pressure Control Equipment

Low-Price Wiring Devices Granted 20% OPA Boost; Others Authorized 10%

WASHINGTON, D. C.—Manufacturers of wiring devices have been granted an increase in their ceiling prices over their base date maximum prices.

For low-priced items, a 20% increase is authorized. These include attachment plugs and caps for which the net price charged by the manufacturer on or before Oct. 1, 1941, was five cents or less; plates; and any convenience, switch, socket, ceiling receptacle, cleat receptacle, rosette, counter device, heater connector, and canopy for which the manufacturers' net price before Oct. 1, 1941, was 20 cents or less. All porcelain electrical wiring devices are also included.

For all other wiring devices, the increase is 10%. These include all attachment plugs, caps, plug receptacles, switches and cutouts including component parts that are listed in the action.

Resellers are permitted by the order to pass the increase on percentage-wise in accordance with the Emergency Price Control Act of 1942, as amended. Special provision is made for sellers who have received individual adjustments, to assure that these will not be "rolled back," and also for producers of electrical wiring devices which could also be priced within other industries, who are permitted to elect to follow the pricing regulation which gives them the higher maximum price.

Twins Meet Pair from Norge



Above two models, apparently twins, show off two Norge products that were designed to look alike. On the left is the new upright Norge home freezer and on the right one of the firm's new refrigerators.

G-E Sampling of Small-Town Dealers' Refrigerator Prospects Nets 85% 'Sold'

BRIDGEPORT, Conn.—Are appliance dealers' refrigerator prospect lists padded with names of persons who will not buy when their refrigerator is ready for delivery?

One survey conducted by the General Electric appliance and merchandising department indicates that in some communities, at least, the answer is an emphatic "NO."

Instead, the survey found, approximately 85% of the prospects will take immediate delivery. They prefer higher priced models and are willing and able to pay cash, it added.

To get the facts of the situation, General Electric selected a small town of 30,000 population for the investigation.

This "typical" town was located in the center of an agricultural area but still had its share of industry and commercial business. It had no labor troubles or boom. It was not near a large metropolitan area.

In order not to upset conditions in any way, the G-E investigators kept the town's two G-E dealers in the dark as to what they were doing.

They got hold of the dealers prospect lists and then sat down to a telephone. They called every name on the lists and asked, "Would you like immediate delivery on a General Electric refrigerator?"

Results of the survey were as follows:

Dealer "A," with a prospect list of 108 names, sold 91 refrigerators, or 84.2%. Two thirds of the models

sold were 7-cu. ft. units. Sixty-six persons paid cash.

Dealer "B," with a prospect list of 53 names, sold 45 refrigerators, or 84.9%. Thirty-one of these were 7-cu. ft. units. Thirty-nine persons paid cash.

While customers would take almost any model, a greater number of deluxe models could have been sold if they had been available, according to the survey. This, the investigators said, proves the value of additional features. The butter conditioner seemed to arouse enthusiasm.

Checking the reasons why 25 prospects failed to buy, the investigators discovered:

Two people could not afford a purchase at this time. Nine had bought other makes. Two wanted larger models and two wanted two-temperature models. One had bought a used refrigerator.

Another had bought a G-E from an out of town dealer. Three had old refrigerators repaired. One listed himself with another dealer in town instead of taking immediate delivery. Three refrigerators on Dealer A's list were duplicated on B's list and were sold by B.

Typical reactions to the phone call were: "Bring it right over," "I'd love to have it," "Dying to get it," "Needing it for four years."

As a result of the survey, 46 new orders were placed on the dealer's prospect lists, the investigators reported.

Stewart-Warner to Make Crystal Refrigerator Co. New Home Heating Unit Sold to Firm Planning Output of Water Heaters

CHICAGO—Plans for fall production by Stewart-Warner Corp. of a small heating unit for homes have just been announced by James S. Knowlson, president and board chairman. The unit has been advanced through all phases of engineering and field testing and will be marketed in limited numbers the latter part of 1946, Mr. Knowlson said.

Incorporating certain principles of Stewart-Warner's "South Wind" aircraft heating equipment, the new heater will provide advantages of an exclusive nature, Mr. Knowlson stated.

In April, 1944, the company announced that it was holding for post-war development designs for a unique space-heating unit for home use. Pilot models, manufactured and field tested under varying conditions continuously since shortly after V-J Day, has been refined and proved successful to the point that decision to launch production this fall has been reached.

FREMONT, Neb.—Jud Whitehead, head of an Oakland, Calif., appliance manufacturing firm, has signed a contract with Frank Hammond, president of the Crystal Refrigerator Mfg. Co. here, turning over the Fremont factory to the California company, which expects to form a Nebraska corporation to manufacture water heaters.

Headquarters of the Nebraska corporation will be at Fremont. Nate Allen, chairman of the Fremont chamber of commerce industrial committee, said the company plans to employ between 100 and 125 persons and expects to be in operation early this fall. The firm will occupy 31,000 sq. ft. of the factory's floor space, while the remaining 56,000 sq. ft., also sold, will be a regional distribution warehouse for a hardware. Manufacture of refrigerators was suspended several years ago.

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what a frame* for your refrigerator!

Pushed into place in 5 seconds
No corner clips needed
No time-wasting screw-fastenings
Clip-type attachments hold tight, snug
Smooth, streamlined surfaces
Curved, formed or flat moldings
Black enameling stock or colors
Engineered by Panelyte
Produced by Panelyte

Close-up of section of Panelyte one-piece door frame: friction clips snap back when frame is in position; removal is easy.

* The Panelyte one-piece molded breaker frame is commonly referred to as "the picture frame molding."

PANELYTE *the structural plastic*

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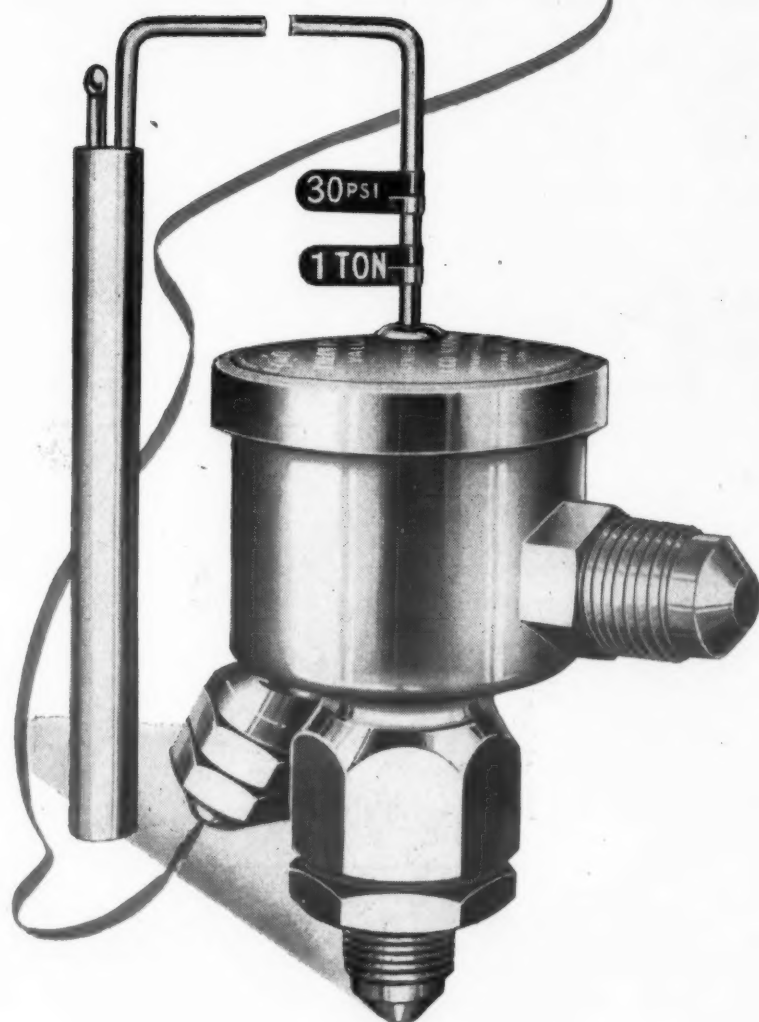
BY A TWIST OF THE WRIST

THE NEW ALCO THERMO-LIMIT VALVE

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The ALCO THERMO-LIMIT VALVE is a "safety" control that limits pressure to prevent motor overload. It is liquid charged for positive control in any location and position. Parts are interchangeable so that pressure, capacity and super-heat can be changed in the field.

Available at your wholesaler's for smaller capacity commercial refrigeration. Ask for our Bulletin 152.



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ACRMA Study to Determine Future Industrial Needs

WASHINGTON, D. C. — Market studies of important industries to determine the potential requirements for refrigeration and air conditioning equipment will be undertaken by the Air Conditioning and Refrigerating Machinery Association, representing many of the larger manufacturers.

Announcement of the establishment of the research and statistical department to conduct this work was made by William B. Henderson, executive vice president of the association. The object of the department will be to maintain current information on the rapidly expanding use of refrigeration and air conditioning machinery and to conduct special studies by assembling, collating, and analyzing all available data bearing on the use and the probable new demands.

Early attention will be given by the new department to a survey of the food industry, one of the largest users of refrigerating and air conditioning equipment. The first phase of this work, which is already under way, deals with the dairy industry and its sales potential for refrigeration equipment. A part of this study dealing with dairy farming already has been completed. The work will be carried on to supplement market research activities of member companies for advertising guidance, and to provide a source for public information about the increasing use of refrigeration and air conditioning equipment for production purposes by other industries.

Carrier Plant--

(Concluded from Page 1, Column 4) each year for 10 years, and \$1,200,000 "as a balloon payment at the end of 10 years with 4% interest," WAA announced.

Concerning immediate plans for use of the property, Cloud Wampler, president of Carrier Corp., said: "We expect to begin operations in the turbine plant this Fall, transferring our heavy machinery there as rapidly as possible. Acquisition of the new plant should enable Carrier to do 33 1/3% more business in fiscal 1947 with a substantially larger long-term increase."

"The expansion program should result in providing some 2,000 additional jobs during the coming year."

"Our budgets call for substantial expenditures for improvements to the acquired property, machinery, and equipment. It is estimated the corporation will spend \$8,000,000 for capital purposes during the remainder of this year and in 1947 and 1948, in addition to the price of the plant."

"Carrier Corp. will not give up its Geddes St. plant. It is proposed to operate both that and the new property."

Klein, Rapport Set Up New G-E Dealership In Buffalo

BUFFALO—The Big Store, Inc., new electrical appliance outlet, has been opened at 1066 Main St. The firm, organized by Joseph Klein, president, and Albert A. Rapport, vice president, will retail General Electric major and small appliances.

REMA Membership--

(Concluded from Page 1, Column 3) manufacturer of heat transfer equipment. During the last three years, REMA has more than doubled in size.

In a statement to the directors, Mr. Spoehrer credited the growth in the association to its various overall and product section activities and to its cooperation with other associations in the industry. He cited the REMA public relations program, efforts in working with the OPA "which have brought about the decontrolling of our industry," cooperation with the National Bureau of Standards in building commercial standards for the industry's products, and the forthcoming All-Industry Refrigeration and Air Conditioning Exposition in the Cleveland Public Auditorium this fall as "clear-cut indications of the steady and very thorough growth of REMA."

Numerical Price List--

(Concluded from Page 1, Column 2) a numerical price list.

"Very few of the manufacturers have numerical price lists so that if someone calls up and wants a part made by a certain manufacturer you have to start at the top of the first page of the manufacturer's catalog and go down the pages until you come to that number."

"It got so bad that when a customer would call up and ask for a certain item which we weren't sure about we would simply tell them that we did not stock it."

G-E Names Turner

(Concluded from Page 1, Column 3) Mr. Turner, who will be located at the Air Conditioning Department headquarters at Bloomfield, N. J., has been associated with the General Electric Co. for the past 12 years and shortly after his return from active duty with the U. S. Navy early this year was named district manager of the central sales district, a position he has held until his new appointment.

Succeeding Mr. Turner as district manager of the Central Sales District will be S. A. Durbin, according to the announcement of new appointments. Mr. Durbin, until now in charge of distributor and contractor sales in the Air Conditioning Department, has been associated with the General Electric Co. since 1929 when he enrolled in the test course for student engineers at Schenectady following his graduation from the University of Notre Dame in that same year.

The announcement also named William G. Cox, until now in charge of the manufacturer section of the Air Conditioning Department's Industrial, Marine and Contractor Division, to succeed Mr. Durbin in that Division. Mr. Cox, a native of Winnipeg, Canada and a graduate of the California Institute of Technology in the class of 1935, has served in application, product, and sales engineering capacities since he became associated with General Electric in 1936.

Bernard D. Maseritz, who until now has served as sales representative in the East Central District, Cleveland, has been named to Mr. Cox's former position and will make his headquarters at Bloomfield. Mr. Maseritz has long been associated with commercial refrigeration, both in sales and installation work and has served as assistant commercial manager and acting manager of the General Electric Supply Corp. as well as district sales representative prior to this present appointment.

Wage-Price Ruling--

(Concluded from Page 1, Column 4) relief, he may raise his workers' wages without the approval of the Wage Stabilization Board. In this respect, however, the NARC statement made the vital distinction that the employer "does not waive his right to file later an application for a price increase based upon such wage increase." Since OPA will not honor any such application without the WSB's approval of the increased wages already in effect, it would be necessary for such an employer to file Form 10 with his nearest Wage-Hour Office.

It is best, said NARC, for the employer to contact his nearest OPA District Office either right after his wage increase approval has been granted or at the time of application to the WSB for such approval. No customer hourly rate, it was emphasized, should be increased without authorization from OPA.

Where the employer has signed a labor agreement, common to the area or industry, the NARC statement said, even if it covers only two or three of his mechanics, he may now raise wages without filing or without approval. Procedure here requires that regardless of the number of employees, if the employer desires a price increase he must first file Form 10 with the WSB, and then obtain authorization from OPA.

In the case where the employees have signed up with the union, but the employer has not, the employer with less than eight workers may raise wages without approval and need only file a statement with OPA.

The NARC further pointed out that employers engaged in "construction and installation work" cannot raise wages without the approval of the Wage Adjustment Board. But any wage decrease, or the establishment of wages in a new plant, new division, or new department, comes under the jurisdiction of the WSB.

SPECIALISTS . . .

in the design, manufacture, application and sale of refrigeration condensing units, Universal Cooler offers a complete line of hermetically-sealed, self-contained and remote type units as the answer to your refrigeration application problem.

HERMETICALLY-SEALED, SELF-CONTAINED and REMOTE TYPE REFRIGERATION CONDENSING UNITS—1/8 to 15 h. p.

The illustration is divided into four quadrants, each representing a stage of the Universal Cooler process:

- ENGINEERING:** Two silhouettes of people at a desk, one writing and one looking at a blueprint.
- MANUFACTURING:** A large, detailed illustration of a refrigeration condensing unit.
- APPLICATION:** A silhouette of a person standing next to a smaller refrigeration unit.
- SALES:** A silhouette of a person walking towards a large building labeled 'SALES'.

At the bottom of the illustration is a circular logo for 'UNIVERSAL COOLER' with the text 'AUTOMATIC REFRIGERATION SINCE 1923' and 'WE SELL TO MANUFACTURERS ONLY'.

UNIVERSAL COOLER

DIVISION INTERNATIONAL DETROLA CORPORATION
MARION, OHIO • BRANTFORD, ONTARIO

If you are a manufacturer, Universal Cooler's quarter century of refrigeration engineering experience, modern production methods and equipment, complete application testing facilities and its protective policy of selling to manufacturers only will interest you. Write, now, for more complete information.

Airtemp Holds First Sales Convention Since 1941 For Field Personnel

DAYTON, Ohio—More than 100 field sales personnel of the Airtemp division of the Chrysler Corp. attended the first convention of that group since 1941 held here recently.

Regional manager, district coordinators, field engineers, field sales representatives, and district representatives conferred with sales department heads.

They saw the \$10,000,000 expansion project now underway which will add 250,000 sq. ft. to present manufacturing space. The new plant will be air conditioned throughout and equipped with modern machinery. It will be in operation late this year.

They were also shown the various processes in the manufacture and testing of Airtemp's triple line of heating, air conditioning, and commercial refrigeration products.

During the conference, termed by division president D. W. Russell as "the kickoff for the task of building successful, prosperous dealers," the representatives were briefed on every phase of policies and procedures governing Airtemp sales operations.

Qualifications and appointment of four classes of dealers were reviewed and a "Presentation Book" was introduced. The book presents the Airtemp proposition to prospective dealers and is for the use of the representatives.

A complete display of the general and specific sales tools which have been created for use in the field and the proper methods for using them were discussed.

The proposed national advertising program which will incorporate over "100,000,000 selling messages," the cooperative dealer local advertising plan, and telephone directory advertising designed to tie-in with the national program were explained in detail.

W. T. West Joins Shepherd In Appliance Dealership

GREENUP, Ky. — Rinehart Shepherd, electrical appliance dealer, has taken W. Tong West as a partner in the business, which is located in the former Ford garage here.

Re-orders prove
ZEROSTATS
Sell Fast!

READ THIS!

"We want all the Zerostats you can send us."
(Signed)
Edlee Distributors, Inc.
Springfield, Mass.

You can make PROFITS
RIGHT NOW in the ready
market for

ZEROSTAT TEMPERATURE ALARM

A completely automatic, completely dependable alarm system that gives instant warning of unsafe temperature rise in home freezers, commercial freezers, meat boxes, chilling rooms, beer coil boxes, air conditioning systems, or any other area requiring maintained temperature.

- ★ AUTOMATIC ACTION
- ★ POSITIVE OPERATION
- ★ FLEXIBLE DESIGN
- ★ TROUBLE-FREE OPERATION
- ★ EASY TO INSTALL

ZEROSTAT Alarm Systems are adaptable and fit any size, shape or make of freezer.

THREE MODELS

\$24.95 • \$29.95 • \$39.95

AVAILABLE IMMEDIATELY
Write for Descriptive Literature

ELECTRIC GLASS COMPANY
Specialists in Temperature Indication,
Control and Alarm
249 NORTH 4TH STREET
PHILADELPHIA 6, PA.

Refrigeration Contractors' Official Suggests Plan for Federal Trade Commission to Regulate Trade Practices

Editor's Note: The following article by Z. E. Jones, whose group is also affiliated with the National Association of Refrigeration Contractors, presents one viewpoint on a problem in the refrigeration contractors' field. The NEWS is always glad to present views on industry problems by those who are close to them, although such views are not necessarily always the same as those held by the editors.

By Z. E. Jones, Secretary-Manager, Refrigeration Contractors Association of Northern California, San Francisco

Shall we passively accept any one of our several "growing pains" as just "another one of those things" to be endured, or shall we try to do something about it? Our pains, like all pains, are symptoms to be examined, diagnosed. Some of them might be reduced by proper and timely treatment developed under the right auspices.

Strong national associations of manufacturers, distributors, wholesalers, jobbers, and contractors in the refrigeration field are necessary. They might well take stock of the facilities offered through all-industry cooperation with the Federal Trade Commission in adopting some enforceable trade practice rules for all merchandising levels from the manufacturer on down to the consumer.

I offer the following plan, which is used by many industries of national scope, and which might be helpful.

TRADE PRACTICE SUBMITTAL PLAN

Trade practice rules for the refrigeration and air conditioning industry may be promulgated by the Federal Trade Commission under its trade practice conference procedure.

The rules may properly be directed toward fostering and promoting the sale and distribution of equipment and products under fair competitive conditions and designed to assist the industry, trade, and the buying public through more effective protection from the harmful effects of unfair methods or practices.

Their operation directed toward these ends would implement the anti-trust laws by taking special cognizance of any practice which suppresses competition, restrains trade, fixes or controls prices through combination or agreement or which injures, destroys, or prevents competition.

A proceeding for the establishment of trade practice rules may be instituted upon application from the industry. In the course of the proceeding a general trade practice conference, under the auspices of the Commission is held. At such a conference proposed rules are considered and thereupon submitted on behalf of

whereby they are afforded the opportunity to present their views to the Commission, including such pertinent information, suggestions or objections as they desire to submit, and to be heard in the premises.

GROUP I RULES

Unfair trade practices usually embraced in Group I rules are considered to be unfair methods of competition, unfair or deceptive acts or practices or other illegal practices prohibited, within the purview of the Federal Government, by acts of Congress, as construed in the deci-

sions of the Federal Trade Commission or the courts.

Appropriate proceedings in the public interest are taken by the Commission to prevent the use by any person, partnership, corporation, or other organization of such unlawful practices in or directly affecting interstate commerce.

GROUP II RULES

Trade practices usually embraced in Group II rules are considered to be conducive to sound business methods and are to be encouraged and promoted individually or through voluntary cooperation exercised in accordance with existing law. Non-observance of such rules would not constitute violation of law.

Where, however, the practice of not complying with any Group II rule is followed in such manner as to result in unfair methods of competition or

practices, corrective proceedings may be instituted by the Commission as in the case of a violation of a Group I rule.

WHAT IS UNFAIR COMPETITION?

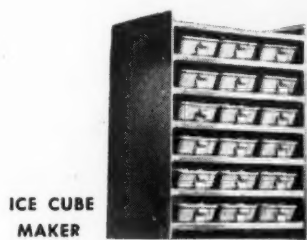
The unfair trade practices of some of the large ice cream and dairy products companies in refrigeration installations on the Pacific Coast, for instance, might properly lend itself to an examination by the Federal Trade Commission. These practices if fully projected could easily wreck and ruin a large part of our industry.

All such groups might be properly dealt with through cooperation of all distribution levels and a determination to respect and protect the legitimate and commonly accepted channels of trade.

The writer believes this industry has nothing to fear from clean, legitimate competition.

Wire PEERLESS for

Fast Delivery!



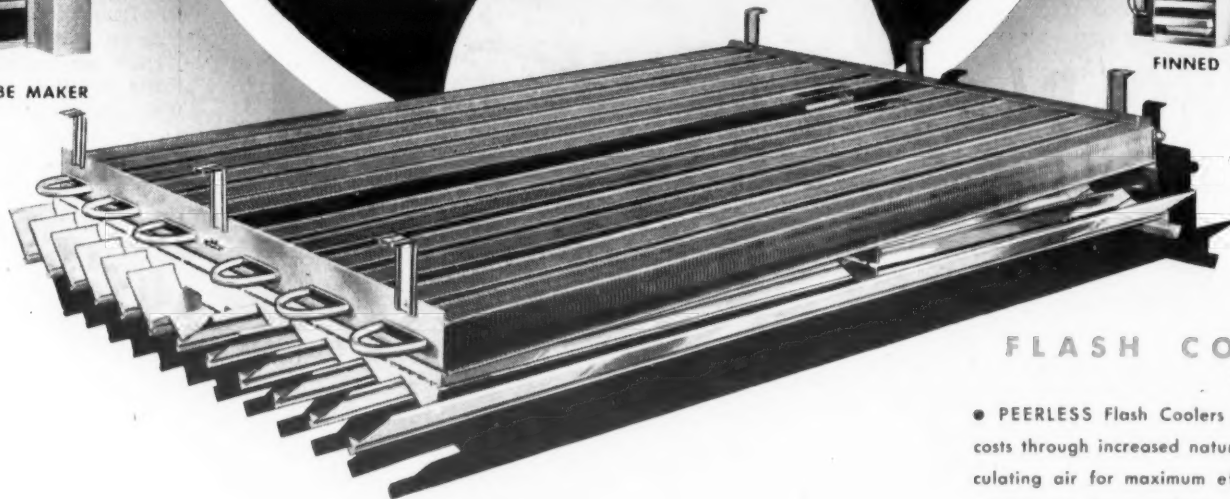
ICE CUBE MAKER



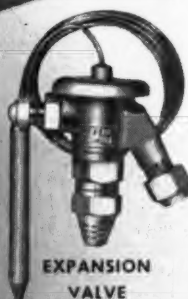
CAPACITY BOOSTER



FINNED ICE CUBE MAKER



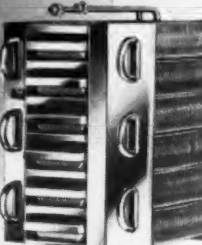
FLASH COOLER



EXPANSION VALVE



OFF CENTER COIL



FINNED ICE CUBE MAKER

PURCO ELECTRIC WATER COOLERS

BRANCHES IN PRINCIPAL CITIES

MAIN OFFICE
440 LAFAYETTE ST.
New York 3, N. Y.

PURCO FILTER CORP. OF AMERICA

DRINKING WATER SPECIALISTS FOR 40 YEARS.

In the West it's
REFRIGERATION SERVICE INC.
Pacific Coast Supply Jobber
since 1928

Your letterhead will bring our latest catalog—also our House Organ.

"The Liquid Line"

3109 Beverly Blvd.
LOS ANGELES 4, CALIF.

REFRIGERATION ACCESSORIES

- Instantaneous Water and Beverage Coolers.
- Oil Separators.
- Two Temperature Valves.
- Accumulator Heat Exchangers.
- Equalizer Tanks.
- Controlled Temperature Photographic Processing Units.
- X-Ray Refrigerating Units.

TEMPRITE PRODUCTS CORPORATION

47 PIQUETTE AVENUE DETROIT 2, MICHIGAN

● One week delivery on PEERLESS Flash Coolers! That's a dream come true, made possible by the speed and thoroughness of our reconversion program. It's not only true of Flash Coolers, but also of Ice Cube Makers and Fin Coils. Better still, PEERLESS can now give immediate delivery on Expansion Valves and Capacity Boosters.

These products are all engineered to give the superior service which will make your installations make more customers for you. Think of PEERLESS and fast delivery when you need products in the refrigeration field.

SOLD THROUGH LEADING REFRIGERATION SUPPLY WHOLESALEERS

PEERLESS of AMERICA, Inc.
333 N. Michigan Ave. Chicago 1, Illinois, U.S.A.



INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

Management Faces Challenge of Lower Output per Worker

Ultra-diplomatic statement by an ultra-liberal young industrialist:

"Our failure in human engineering is creating an inefficiency which handicaps the very purpose of mass production—lower costs.

"In our company, one group of operations which took 96 minutes in 1940 took 128 minutes five years later. Another group which took 1,188 minutes in 1940 took, five years later, a total of 1,943 minutes.

"These operations have not been changed in the time interval.

"On the whole, productivity per worker in our plants declined more

than 34% during the war period.

"Mass production is achieved by both machines and men. We have not successfully written into our equation whatever complex factor represents man.

"If we rewrite the equations to take man into account, I believe we can make as much progress toward lower costs during the next 10 years as we made during the past quarter century through machine development.

"Management must take the initiative for developing these relationships between labor and management." (Henry Ford II.)

And Dr. Dow

Another quote:

"Labor is at about the lowest efficiency it has ever been," Dr. Willard H. Dow, president of the Dow Chemical Co., told his stockholders in a letter accompanying the firm's 49th annual report.

"As long as we continue to talk and think in terms of raising wages

to meet higher costs of living," he wrote, "nothing can stop the continually ascending spiral of inflation.

"Labor rates and benefits in our company are of the highest paid in the industry," he continued. "However, it is a notorious fact that manpower in general is at about the lowest efficiency it has ever been."

He called inflation "a symptom of human desire not to work and produce" and said it might be checked only through "a widespread improvement in labor efficiency."

The Summary

What does it all add up to—confusion and chaos? Are people, like that widely-hailed, lugubrious desk-caricature, "no damned good"—or will we all be willing to work an honest hour for an honest dollar soon?

Has the dread of atomic warfare rendered us incapable of progressive action?

We don't think so. The spurring of that age-old stimulus: "I want to do a job, for the satisfaction of getting it done," may yet lead insatiable young men and women to rescue us from the cesspool of sloth, laziness, and non-cooperativeness.

The new generation will want to achieve new things, for its own personal satisfaction.

Why Corporations Are Losing Money

Manufacturers, distributors, and dealers are pessimistic and discouraged today. Things aren't working

out the way they expected. Business isn't booming, as it should. And the war's end did little to alleviate the daily quota of headaches. Laboring men found surcease from war fatigue by striking. Business men had no comparable opiate. In fact, their troubles pyramided. Things seemed to be more fouled up than ever.

Unjustified wage raises bump against slowly-yielding OPA price ceilings, under our government-shackled economy today, for example.

So it happens that manufacturers, distributors, and dealers are losing money. And their cash reserves are melting away.

That's bad enough.

But the current cost-item which sears the waking-hours of most manufacturers (and gives them bad dreams, too) is the deterioration of labor-productivity.

In most plants, during the late unlamented World War II, worker-output dropped alarmingly. An unprecedented labor-scarcity led to open winking at "gold-bricking" on the job.

"What the hell—we have to get the stuff out, one way or another, don't we? The government is paying the bill, isn't it? If we don't meet quotas, we may lose the war. Nuts to normal productivity-rates. Let's hire more 'workers' and get out the 'stuff' faster."

So reasoned too many operators of war plants.

This genuflection to expediency has carried over into the reconversion period.

In most of the factories we have visited recently, labor productivity rates are a sad travesty on the old American concept of "an honest hour for an honest dollar."

Sly Communist Insinuations

"Let's stretch out the job—tomorrow we'll be in the breadline."

That slogan has been reiterated by the Communist infiltrators (the preceding thought should be spelled: "in-full-traitors") who wield such inordinate power in America's sheep-leader unions—compared to their actual numbers.

One Way to Win A War In Advance

These worshippers of Russia—and obstacle-raisers to the resurgence of America's power—are doing their damndest to render this country impotent during the crucial decade of the 1950's.

In communistic Russia's hell-bent drive toward world dominance, only the undeniably powerful United States of America stands upright as a high hurdle blocking its path.

Ergo, American Communists have been assigned to undermine us, by "boring from within"—especially in labor union activities and in our school system.

The "Fifth Column" within our midst hopes to play upon the credulities of our workers and voters so cutely that we'll be paralyzed "inside"—and thus become an easy victim for World War III's swift atomic sequences.

They Hope That Russia Wins Over All

America's Communists follow faithfully the dictated-in-Russia Party Line, to wit:

- (1) "Get the boys home" (demobilize our army, and thus render us impotent).
- (2) "Don't shake a fist" (sink our supreme navy).
- (3) "Avoid international inferiority complexes" (quit making atomic bombs—and give the Atomic Secret to Russia).

Why Men Loaf

All this indoctrination of the American labor force has done its dirt, temporarily.

Will better-disciplined nations leave us in the lurch, in the cultivation of both domestic and foreign markets?

We don't think so. Americans are noted for their violent swings, their tremendous mass emotions.

Today the American Working Man doesn't care whether he works or not. He has money in his pocket, and he can't buy much of anything with that money.

Tomorrow may be a different story.

Never Underestimate the Power of a Woman

When new refrigerators, ranges, automobiles, automatic laundry machines, radios, television sets, nylon stockings, wallpaper, floor-coverings, handsome clothing, and plenty of butter are available, the working man may be pressured by his family into a laboring mood.

His wife will insist upon it!

As soon as the shop-windows are full of goods which she has yearned for, she'll make the Old Man go to work again.

The "Little Woman," whose wants and needs are insatiable, is the key to our national (and international) log-jam.

Undoubtedly the Communists are well-organized and deplorably regimented—but they can't beat the Power of a Woman!

Planned Confusion

President B. H. Namm of the National Retail Dry Goods Association, in a recent speech, offered a sentiment all businessmen will echo.

"It seems then as though the future of America was bright indeed. . . . The Associated Press and the other news services assembled articles which might have been described as reconversion timetables. . . . We were told that the problems were large, but not complicated; that it would take a certain length of time to clear plants of the machines which were making the tools of war. Then it would take a certain additional time to get tooled up for making peacetime products. . . . The real problems which lay ahead weren't even mentioned. It might even have been considered subversive (at that time) to make a gloomy prediction of black markets, grave, continuing shortages of merchandise, and widespread industrial strife.

"The fact is, though, that nobody predicted these conditions because nobody saw them coming. And from that fact you can draw your own conclusion. You have your choice of two conclusions. One conclusion is that the adverse conditions which followed were inevitable. Another conclusion, to which I lean, is that they were, to a large extent, created."

New Refrigeration Motors

1/4, 1/2 and 1/2 h.p. 110 volt single phase, 60 cycles in 500 to 1000 lots, delivery—August, September, October.

We want 1/4 to 2 h.p. new condensing units, with or without motors, and other scarce commercial refrigeration items for our dealers and are not interested in selling motors for profit. Tell us what you have to offer, in exchange, regardless of quantity. State quantity, price and complete description and what size motors and quantity wanted.

Box 2049, Air Conditioning & Refrigeration News

PICKED SIX MONTHS AGO AND STILL FRESH...

THANKS TO KOLD HOLD!

No matter whether it's frozen foods picked six months ago, or milk, meat, ice cream or other types of perishable products, Kold-Hold equipment gives safer storage and transportation at lower cost. Kold-Hold Serpentine Plate Type Evaporators have no equal in efficiency and dependability for locker plant space cooling, for shelves and stands in sharp freezing, or as cabinet liners, shelves and dividers. Kold-Hold Evaporators maintain the temperature of delivery bodies at the uniform level necessary in the successful transportation of fresh meat, ice cream, frozen foods and other perishables.

Kold-Hold gives you these advantages:

1. Maximum prime surface.
2. Highest rate of plate heat acceptance obtainable for low temperature work with natural convection low sides.
3. Minimum pressure drop.
4. Freedom from oil logging since the refrigerant circulates freely from inlet to outlet.
5. No chance of short-circuiting of the refrigerant.
6. Maximum K factor.

REMA CONVENTION

Don't miss the convention of the Refrigeration Equipment Manufacturers Association to be held in Cleveland Public Auditorium October 28 to October 31. You can see all the Kold-Hold products at our space No. 414

KOLD-HOLD

KOLD-HOLD MANUFACTURING COMPANY
500 North Grand Avenue Lansing 4, Michigan



It's a REVELATION—that's all!



- ★ Exclusive Dealer Franchise
- ★ Now in quantity production
- ★ All sizes: Industrial and Commercial
- ★ The last word in...

ELECTRIC WATER COOLERS

Revelation Company
Division of
Interstate Engineering Corporation
2600 Imperial Highway
El Segundo, California

York Gets Ceiling Prices On 6 Air Conditioners

YORK, Pa. — Retail ceilings of \$349.50, \$399.50, and \$499.50 are included in the schedule of maximum prices fixed recently by OPA for six models of portable air conditioners manufactured by York Corp.

The agency approved the ceilings in Order 5093, MPR 188. For sales by York to wholesale distributors, ceilings were established as follows:

| Model | Each |
|----------|----------|
| 1-1, 1-2 | \$201.44 |
| 2-1, 2-2 | 215.43 |
| 3-1, 3-2 | 259.52 |

The following amounts may be added if the conditioners are sold equipped as described:

| Optional Equipment | 61-C | 76-C | 91-C |
|---------------------------------|---------|---------|---------|
| For Use With | Models | Models | Models |
| Direct current | \$12.80 | \$16.00 | \$17.62 |
| 50/60 cycle alternating current | 1.47 | 2.26 | 2.26 |
| Water for cooling | | | 14.85 |

Following are the ceilings on sales by wholesale distributors to retail dealers:

| Model | For Sales to Retail Dealers in Zone 1 | For Sales to Retail Dealers in Zone 2 |
|-------|---------------------------------------|---------------------------------------|
| 1-1 | \$245.66 | \$255.66 |
| 1-2 | 245.66 | 255.66 |
| 2-1 | 265.96 | 275.96 |
| 2-2 | 265.96 | 275.96 |
| 3-1 | 324.40 | 334.40 |
| 3-2 | 324.40 | 334.40 |

Distributors located in zones other than Zone 1 are authorized to add the following amounts as freight:

| Zone | Amount |
|------|--------|
| 2 | \$3.00 |
| 3 | 4.50 |
| 4 | 6.00 |
| 5 | 8.00 |

Amounts which may be added if optional equipment is provided are as follows:

| Optional Equipment | 61-C | 76-C | 91-C |
|---------------------------------|---------|---------|---------|
| For Use With | Models | Models | Models |
| Direct current | \$15.61 | \$19.75 | \$22.03 |
| 50/60 cycle alternating current | 1.79 | 2.79 | 2.79 |
| Water for cooling | | | 17.94 |

Maximum prices for sales by retail dealers to consumers in Zone 1 were set as follows:

| Model | Price |
|----------|----------|
| 1-1, 1-2 | \$349.50 |
| 2-1, 2-2 | 399.50 |
| 3-1, 3-2 | 499.50 |

Dealers located in other zones may add the following amounts:

| Zone | Amount |
|------|---------|
| 2 | \$15.00 |
| 3 | 16.50 |
| 4 | 18.00 |
| 5 | 20.00 |

If the optional equipment indicated is furnished, the following amounts may be added:

| Optional Equipment | 61-C | 76-C | 91-C |
|---------------------------------|---------|---------|---------|
| For Use With | Models | Models | Models |
| Direct current | \$22.50 | \$29.75 | \$34.00 |
| 50/60 cycle alternating current | 2.50 | 4.00 | 4.00 |
| Water for cooling | | | 27.50 |

The retail ceilings include delivery, installation, and a one-year warranty. All prices include the Federal excise tax and all are for conditioners equipped for use with 60-cycle alternating current.

Harrod, Reynolds Open New Frankfort Refrigeration Co.

FRANKFORT, Ky.—A charter has been granted to Harrod-Reynolds Refrigeration Co. of this city, which proposes to conduct a wholesale and retail business under authorized capital stock of \$6,000. The principals include: Earl Harrod, George R. Reynolds, John W. Hughes, Jr., Guy M. Reeve, Jr., Charles H. Morris, and Arthur Wittwer.

GUARANTEED

Sub-Zero Temperatures (100° to 15° Below Zero)

AMERICAN'S NEW 5-Ton Gasoline Powered, Automatic Controlled Refrigeration Unit for Trailers

TEN MONTHS Actual Hauling of Perishable and Frozen Foods Give This Unit an Exceptional Test Record

NOW READY To Mount on Your Trailer. Regardless of Make

TERRIFIC DEMAND If you are contemplating low temperature hauling with your reefer, get in touch with our sales department immediately for details and price.

American Manufacturing Co. Montgomery, Alabama

Nebraska Action on OPA Locker Cases Waits Meat De-control Policy

LINCOLN, Neb.—All hearings in OPA meat violation cases concerning freezer locker plants and now pending have been ordered continued until Sept. 11 by Federal Judge John W. Delehant.

The order was given so that OPA might see where it stands after the newly appointed national de-control board acts, deciding by Aug. 20 whether meat controls should continue off or be put back in force.

The court's ruling temporarily held up the disposition of 18 OPA injunction actions which are pending against owners of locker plants and meat departments in Southeastern Nebraska. Judge Delehant indicated that he would dismiss all the OPA meat violation actions in which OPA sought to restrain the defendants from further violations, should the board not replace controls.

Large Walk-In Box Added To Kramer Trenton Lab.

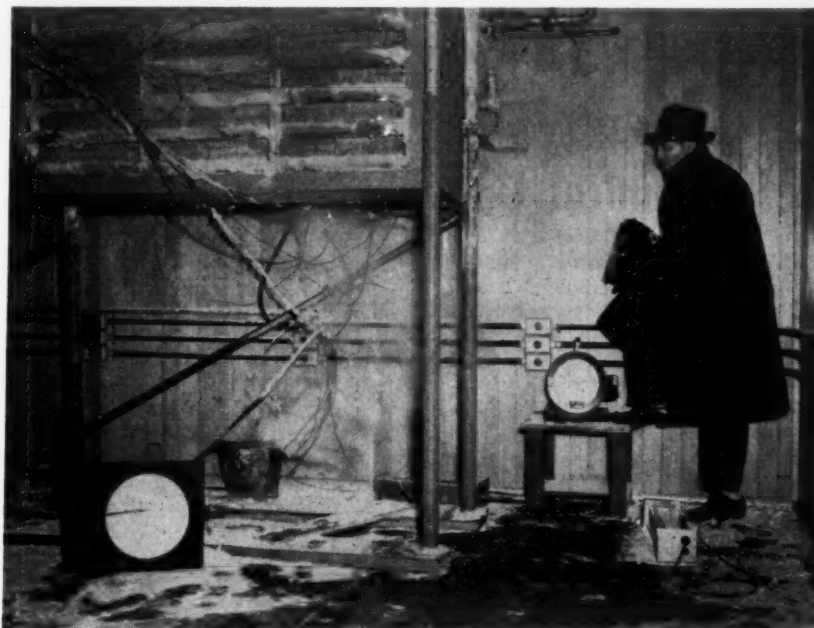
TRENTON, N. J.—To permit more intensive research in the low temperature field, the Kramer Trenton Co. here has installed a large, low temperature, walk-in refrigerator and other equipment in its experimental laboratory.

The walk-in refrigerator is said to be capable of maintaining temperatures below -40° F. over a wide range of humidities subject to close control.

It permits the testing, of large capacity units under the most severe conditions and is equipped with modern instruments for indicating and recording temperatures, humidities, refrigerant flow, and current consumption.

The Kramer laboratory staff is now engaged in the study of refrigeration equipment operation with "F-22" at extremely low temperatures, it was said.

Studies recently completed in the laboratory made possible the com-



Above is a section of the Kramer Trenton experimental laboratory.

putation of rapid selection tables which give 1440 calculations for heat loads and evaporator sizes. They cover a wide range of freezing and storing operations through temperatures varying from 10° F. to -20° F.

EMULATION IS THE SINCEREST TRIBUTE

"DETROIT"

PIONEERED

Gas Charging

"13 YEARS AGO"

NOW IT IS THE ACCEPTED STANDARD OF THE REFRIGERATION INDUSTRY

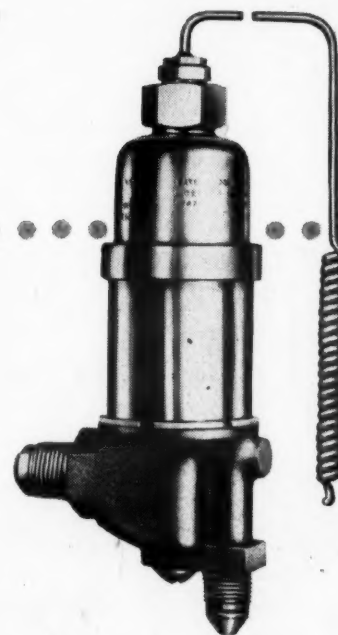
The greatest tribute which can be paid to the soundness of a principle is its general endorsement by competition.

Thirteen years ago "Detroit" pioneered gas charging. Now, nearly all manufacturers of expansion valves have adopted gas charging, at least in principle. Gas charging has become the accepted standard of the refrigeration industry.

Gas charging puts a definite limit on maximum operating pressure—guards against motor overload. Often this makes possible use of a smaller motor, since it does not have to work against excessive pressure during the pull-down period. Gas charged valves balance the system more quickly when starting up, insuring fast, positive action.

"Detroit" Valves offer gas charging in the simplest, most effective form. A single efficient power element is used.

All "Detroit" Expansion Valves are gas charged, which accounts for their wide popularity.



No. 673 Thermostatic Expansion Valve

For many years the standard of the refrigeration industry. Orifice sizes $\frac{3}{4}$ " to $\frac{1}{2}$ " with capacities up to $3\frac{1}{2}$ tons Freon 12 or Sulphur Dioxide and 6 tons Methyl.



No. 787 "Dura-ram" Expansion Valve

Representative of the "Detroit" large capacity line. No. 788 is rated 12 to 20 tons—No. 787—6 to 11 tons—No. 786—3 to 6 tons. Has external equalizer connection and can be furnished with No. 790 distributor with either 6, 12, or 18 openings ($\frac{1}{4}$ " each) for multiple distribution.

DETROIT LUBRICATOR COMPANY General Offices: 5900 TRUMBULL AVENUE DETROIT 8, MICHIGAN

Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION
Canadian Representatives — RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG



"Detroit" Heating and Refrigeration Controls • Engine Safety Controls • Safety Float Valves and Oil Burner Accessories • "Detroit" Expansion Valves and Refrigeration Accessories • Stationary and Locomotive Lubricators

OPA Order Outlines Distributor Pricing For 2 Admiral Units

CHICAGO—Methods to be used by distributors of two models of Admiral Corp.'s Dual-Temp refrigerators for sales to servicing dealers are outlined in Order 19, recently issued by OPA under MPR 598.

Models affected are TD-946 and TD-746.

The order prescribes the following formula:

"(1) A distributor's ceiling price for sales in each zone of each model to servicing dealers (dealers who furnish delivery, installation to electric facilities provided by the consumer, and all the services which must be supplied the ultimate consumer in connection with the sale of the refrigerator) shall be the price which will yield the distributor the same proportion of the total dollar margin between the manufacturer's price to him and the dealer's price for resales to ultimate consumers in that zone as he received during the period Oct. 1-15, 1941 in connection with the sale of the most comparable model produced by the Stewart-Warner Corp. to the same class of purchasing dealer.

"(2) If a distributor cannot determine his ceiling prices . . . under subparagraph (1) above, his ceiling price for sales of that model to a particular class of purchasing dealer is the ceiling price established under this order for the same sale by his

"closest seller of the same class."

"(3) If a distributor cannot determine his ceiling price . . . under the provisions of subparagraph (1) or (2) above, he shall determine his ceiling price . . . in accordance with the provisions of section 14 of Maximum Price Regulation No. 598, as amended.

"(4) A distributor who, at the request of and on behalf of the dealer (a non-servicing dealer), provides the consumer with delivery, installation to electric facilities provided by the consumer, and first year service, may add to the ceiling price he determined under subparagraph (1), (2), or (3) . . . an additional charge per refrigerator (which must be separately stated) no greater than the amount set forth below opposite each model:

| | |
|--------|---------|
| Model: | |
| TD-746 | \$12.75 |
| TD-946 | 14.00 |

Cutler Promotes Sales Of Major Appliances At Assoc. Merchandising

NEW YORK CITY—Joseph D. Cutler has assumed the duties of sales promotion representative of major appliances for the Associated Merchandising Corp. here.

Former positions of Mr. Cutler include buyer of major appliances for the Wm. T. Knott stores and also a post with Frigidaire division of General Motors. He was a member of the armed forces for four years.

Mr. Cutler will be under the supervision of Bernie Zients.

Dealers Send Trucks To Frigidaire Plant

BUFFALO, N. Y. — The current shortage of freight cars has become so acute that Frigidaire dealers in this district are sending their own trucks to the Division's Dayton (Ohio) plant to pick up refrigerators. Fifty-two dealers had trucks in Dayton in a single day.

A spokesman for Frigidaire's wholesale office here said no railroad carload shipments of refrigerators had been received in a week. He added that certain days have been set aside for dealers in various districts to pick up their quota by truck.

(The Association of American Railroads recently asked shippers to accelerate unloading operations because there is an average daily shortage of 16,091 cars. Blame for the shortage was laid to the five-day week by the Association, which said Saturday and Sunday holidays have added one-half day to the average length of time it takes to unload each car.)

Hens & Kelly Re-establishes Appliance Dept. In Basement

BUFFALO—Hens & Kelly department store, which has been out of the electrical appliance business since the war, has re-established an appliance department in its basement, featuring a complete line of major household appliances. Harry R. Cary, buyer of appliances, will manage it.

Twin City Dealers Promote Confidence, Goodwill

Thanks For Being so Patient!



● YES, the War has been over for a year and you're still waiting for those home appliances you ordered weeks and months ago! We know you've been exasperated at times . . . and, to tell you the truth, so have we.

Like you, we thought appliance factories would be in full production by mid-summer. But now they're faced with a shortage of metals . . . principally copper. That's why we still can't give you a definite delivery date on many large appliances.

We think it's good judgment for you to wait until the particular make of appliance you want is ready. After all, dependable equipment backed by a nationally-known manufacturer is worth waiting for. It won't be too long . . . until then, THANKS FOR BEING SO PATIENT!

INSERT DEALERS' NAMES AND ADDRESSES

For Nationally Advertised Home Appliances, Look for this Emblem

ST. PAUL APPLIANCE DEALERS ASSOCIATION

Appliance Dealers Association in the Twin Cities is running a series of four advertisements in local papers to promote confidence and goodwill among potential appliance customers and to keep member dealers' and the association's name before the public in these times of merchandise shortages. The above advertisement appeared in July.

Jordan Silver Named Wesco Manager In New Haven

NEW HAVEN, Conn.—Jordan K. Silver has been named manager of the Westinghouse Electric Supply Co. branch here, succeeding Henry E. Mitchell, who will continue as special representative.

After joining the firm in 1919, Mr. Silver received warehouse and office training at Boston, he served as an apparatus and supply salesman in Maine and New Hampshire, and in 1931 he became branch manager at Providence, R. I.

He returned to Boston in 1937 as manager of dealer merchandise. During the war he acted as a specialist for apparatus and supplies used on government properties in the Boston area.

E.H. Lessard Opens New Showroom, Warehouse

SANTA ROSA, Calif.—A new showroom and warehouse have been opened at 118 Sebastopol Ave. here by the Lessard Equipment Co., wholesale distributor of home appliances and electrical equipment, it has been announced.

The Lessard firm is owned and operated by E. H. Lessard, formerly of Portland, Ore., who started the business here in July, 1945, distributing frozen food cabinets, farm implements, and electric generating plants.

The company operates in the Redwood Empire, Napa, and Sacramento valleys.

The firm has three salesmen traveling its territories.

THE SPRING'S THE THING

That woven rustless spring steel spring imbedded in live sponge rubber makes BRIDGEPORT FABRICS' Innerseal different from any other weather stripping. No other weather stripping fits as snugly into corners and around curves. No other weather stripping stands up better under day in and day out use. It's useful in so many products—have you considered how it will improve yours? Send for samples—no obligation, of course.

Innerseal is manufactured only by—

BRIDGEPORT FABRICS, INC.

Established 1837

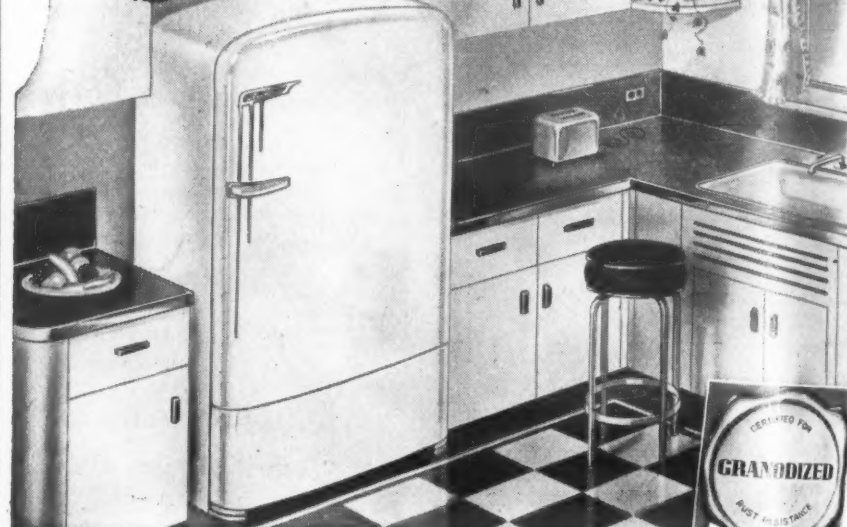
BRIDGEPORT CONNECTICUT

Distributed by
JARROW PRODUCTS
420 N. La Salle St.
CHICAGO, ILL.

Distributed by
KASON HARDWARE CORP.
127-137 Wallabout St.
BROOKLYN, N. Y.

THE CHARM OF A

Beautiful Finish



GRANODIZED . . .

Spray Granodizing metal surfaces assures a durable, lustrous paint finish. The smooth, tight, hard, phosphate coating anchors paint to the metal for permanent protection; preventing the spread of rust from accidental injury to the paint finish.

The appealing beauty of the paint finish when applied to a Granodized surface will endure, whether it be the finish of automobile, refrigerator, washing-machine, kitchen cabinet or other products constructed of sheet metal.

MANUFACTURERS OF INHIBITORS AND METAL WORKING CHEMICALS

AMERICAN ACP PAINT CO.
AMBLER PENNA.

York Hits Highest Employment and Production Peak

YORK, Pa.—York Corp., manufacturer of air conditioning and refrigeration equipment, is operating at the highest peak of production and employment in its history, including the war period, stockholders were informed in the firm's nine months report just released.

Net profits for the nine months ending June 30, 1946, stood at \$791,082, the report said. This represented a gain of \$437,353 over the \$353,709 for the first half of the fiscal year.

"A large part of our production, however, is going into work in process, resulting in products and systems in various stages of completion, a large portion lacking only a few short items before shipment," President S. E. Lauer declared in the report.

This record was attained despite effects of the steel, coal, rail, and copper strikes which make balanced production impossible, according to Mr. Lauer. "Many small suppliers seem to be in a state of confusion and are falling down seriously on their commitments," he added.

"As a typical example, recently one supplier whose deliveries were long overdue, suddenly liquidated because of continued labor irritations, short supplies, and difficulties with price relief."

With a 31% gain in production employees over a year ago, Mr. Lauer believes that "this increased employment gives us a potential capacity which under more stabilized conditions of procurement should permit us to quickly reduce our unfilled order backlog and improve shipping time on new bookings."

The report listed partly completed contracts at \$7,265,434, and uncompleted orders not included in sales at \$20,028,275. This, it said, does not include approximately \$15,000,000 worth of orders on hand June 30, 1946, from distributors and for accessory equipment, supplies, and service, which are not recorded until shipped.

Completed sales for the nine months period were listed at \$15,976,014. Orders booked during that time amounted to \$28,559,122.

Now operating on a 40-hour work week, Mr. Lauer declared that the company's record for "non-stoppage" of production for any cause during the war has continued since V-J Day. "We are doing everything we can consistent with good business practice, to continue these satisfactory employee-employer relations," he said.

Minneapolis-Honeywell Co. Reports \$977,707 Profit

MINNEAPOLIS—A \$977,707 net profit after taxes has been reported by the Minneapolis-Honeywell Regulator Co. for the quarter ended June 30. This indicates a drop of \$9,987 as compared with the figure for a similar period in 1945. With the announcement of the second quarter earnings the firm's net profit for the six months just ended comes to \$1,630,665.

New Langsenkamp Building Features Full Length Dock

SOUTH BEND, Ind.—Less than five months after the construction contract was let, the F. H. Langsenkamp Co., refrigeration supplies wholesaler, moved into its new building at 333 Hydraulic Ave. here.

To eliminate the use of hoists and other loading equipment, a loading dock runs the entire length of the 60 x 100 ft. structure. A truck entrance large enough to permit semi-trailers to drive in and unload is located at the north end of the building. A receiving dock is situated at the south end.

O. Hurley, J. Goss Establish Refrigeration Firm In Glendale

GLENDAL, Calif.—Cal-Ore Refrigeration Co. is the firm name under which Oscar Hurley and John D. Goss have published a certificate that they are conducting business at 245 South Glendale Ave., Glendale, it is reported.

Cox-Frank Corp. Incorporates Under Virginia Law As Distributing, Contracting Firm In Norfolk

NORFOLK, Va.—The Cox-Frank Corp., distributor and contractor for air conditioning, commercial refrigeration, in addition to automatic heating here, has incorporated under the laws of the state of Virginia.

Organized in January of this year by J. Gilbert Frank of Norfolk and William A. Cox, Jr., of Virginia Beach, the firm, in its contracting phase, deals largely in comfort and process installations in the business, industrial, agricultural, and marine fields.

It operates primarily in the Norfolk trading area but takes large jobs further afield, according to company officials.

Mr. Frank, who has had 14 years experience in refrigeration, air conditioning, and heating, also holds a plumbing and heating contractor's license in the state of North Carolina, and is a member of the American Society of Refrigerating Engineers.

He has served as district repre-

sentative, service and installation manager, and air conditioning, commercial engineering and sales manager for a distributor operating in eastern Virginia and the state of North Carolina.

Mr. Cox has recently been certified as a heating and ventilating engineer by the State of Virginia. He belongs to the A.S.R.E. and the American Society of Heating and Ventilating Engineers.

After five years active duty in the U. S. Army, including service in Europe, Mr. Cox was separated last January from the armed forces, in grade of colonel.

Before the war, he had worked in the air conditioning, refrigeration, heating, and ventilating fields since 1934, when he was graduated from Virginia Polytechnic Institute with a degree in mechanical engineering. He had been a senior engineer with a distributor and contractor, and a partner and engineer in a newly formed firm.

Lack of Servicing, Parts Blocks Bombay Air Conditioning

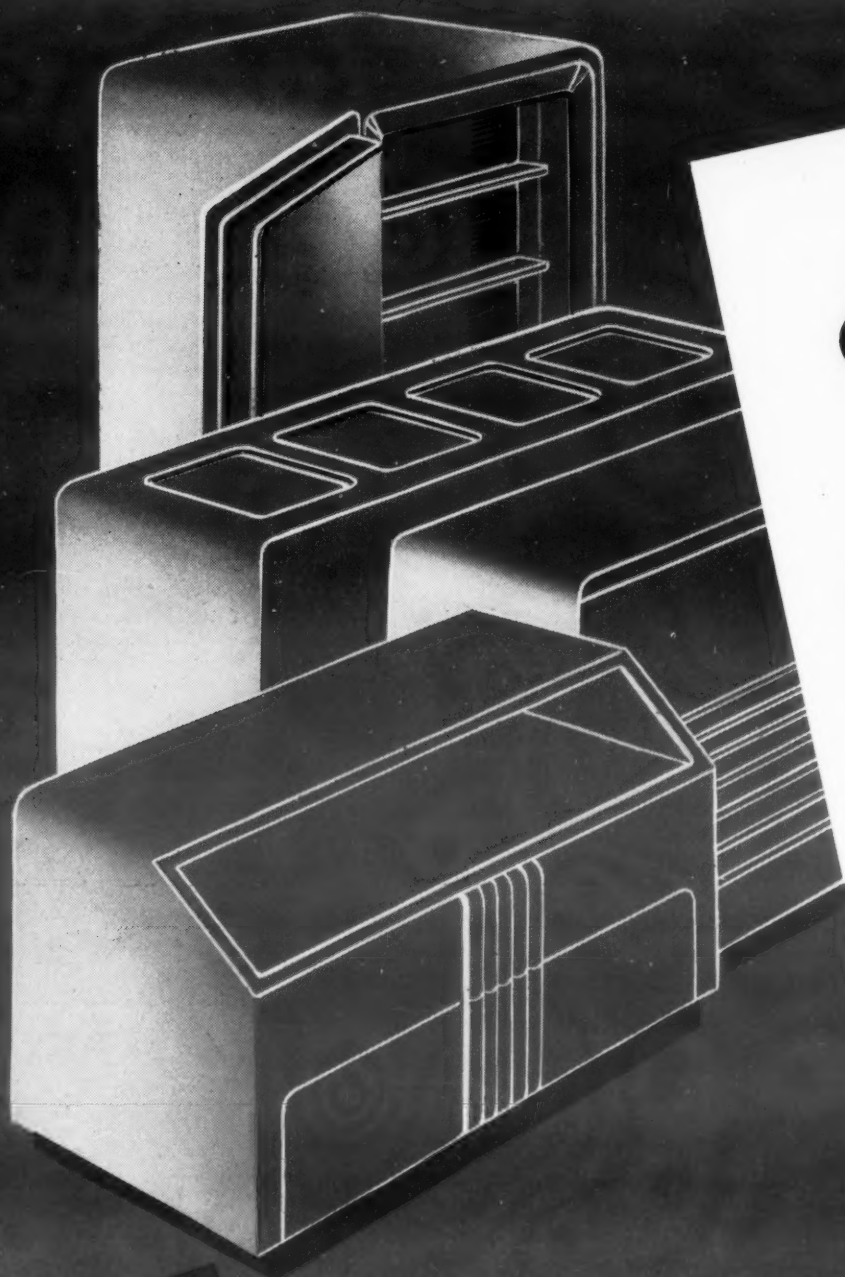
WASHINGTON, D. C.—Lack of efficient servicing and of replacement parts and accessories were blamed as the greatest handicap to the progress of air conditioning in Bombay, India, in an article published by Foreign Commerce Weekly, U. S. Department of Commerce magazine.

"Although complete air conditioning of office buildings . . . began about 10 years ago, little progress was made because of the war," the article said.

"However, portable conditioners are used in some private offices and homes, and are becoming more popular as units become available.

"Air conditioning has not been installed in factories to any large extent. Several textile mills are equipped with humidifying apparatus, the air being treated by 'evaporated cooling.'"

KEROTEST VALVES



Specified on Quality
AIR CONDITIONING and REFRIGERATION UNITS

KEROTEST VALVES and FITTINGS do the best job—on every job because of KEROTEST advanced engineering, master craftsmanship and built-in dependability.
Let KEROTEST serve you now!

New

WRITE TODAY!

For this 16-page informative technical bulletin.

KEROTEST MANUFACTURING CO.
PITTSBURGH 22, PENNA.

Branch Offices

NEW YORK • CHICAGO • DETROIT • LOS ANGELES

For **DEPENDABLE Refrigerants**

"EXTRA DRY ESOTOO"
(Liquid Sulfur Dioxide)

"V-METH-L"
(Methyl Chloride)

Distributors of
"FREON" REFRIGERANTS
11, 12, 21, 22, 113

VIRGINIA SMELTING COMPANY
NEW YORK • BOSTON • DETROIT

Jahnke Heads Advertising For Liquid Carbonic Corp.



GEORGE T. JAHNKE

CHICAGO—George T. Jahnke has been appointed director of advertising for the Liquid Carbonic Corp., manufacturer of ice cream cabinets, soda fountains, and allied items, with full control over all customer and public relations, P. F. Lavedan, president, has announced.

Mr. Jahnke had handled the company's advertising from 1919 until shortly after the outbreak of World War II. Then he organized and headed for more than three years a division to expedite materials and parts for war contracts. In March of 1944, he resumed his advertising duties.

Heavy Duplication of Orders Indicated By Spot Check, Warns Gov't Official

NEW YORK CITY—Emphasizing that forced cancellations later may be more costly than those made now, Under-Secretary of Commerce Alfred Schindler advised in a recent address here that producers and distributors should survey orders on their books to determine what proportion is fictitious and represents duplication of orders.

Mr. Schindler told the Commerce and Industry Association of New York that a spot check, which by no means, however, could be considered an average for the country, showed duplication of orders for automobiles, home appliances, and other merchandise ranged as high as 33 1/3%.

"Businessmen," he added, "should give careful thought to the amount and extent of their inventories. It may be the better part of wisdom in the long run—with due regard for special and exceptional circumstances—to shorten some long-range commitments and to consider canceling some or all duplicate orders."

Mr. Schindler also suggested that businessmen should immediately review the need for any contemplated construction at this time because of the critical housing situation. Moreover, he continued, they should defer any capital outlays that can for the time be postponed.

Asserting that a seller's market of the present type is a "very dangerous development," he warned that "price gouging and unnecessary inventory speculation" will buy for

"the few careless and short-sighted" businessmen who go in for such practices the "deadly gift" of consumer ill will.

"You can be certain," he said, "that this type of profiteering seller will be at a very definite disadvantage in the keen competition that will return when supplies are plentiful once again. For consumers have long memories—particularly when they feel they've been taken advantage of unnecessarily at a time when they needed help most."

Perkins to Manage New M-H Rochester Branch

ROCHESTER, N. Y.—Under the supervision of Stanley H. Perkins, a new Minneapolis-Honeywell branch office will be opened in the Exchange Bldg. here, announces Arnold Michelson, New York resident vice president of the regulator company.

This office will be responsible for sales and service of heating, ventilating, and air conditioning controls in Livingston, Monroe, Steuben, Wayne, Yates, Seneca, Ontario, Schuyler, and Chemung counties. Tioga county in Pennsylvania also will become part of the company's Rochester district.

Other personnel headquartering at the new office are Harold Greene, Gerald C. Britton, and Orville Kelly.

Cite 5 In Inquiry For Annual Reports

NEW YORK CITY—The 1945 annual reports of five corporations in the refrigeration and air conditioning industry have received the "Highest Merit Award" citation in the yearly survey of annual reports recently completed by the magazine, *Financial World*.

The corporations are: Carrier Corp., General Electric Co., Servel, Inc., Westinghouse Electric Corp., and York Corp.

Their reports will now be considered along with several hundred others by an independent board of judges for the "best" in each of 80 industrial classifications and for the "Best of All Industry" award. Awards will be presented winners at a banquet here Oct. 4.

Weston Smith, business editor of *Financial World*, said the survey revealed the greatest progress yet in a single year in corporation reporting. Of 1,500 reports selected for initial judging, 581, or 38%, qualified as "modern," compared to 30% a year ago and 6% in 1940.

Represent Temprite



H. B. WEEKS



AUSTIN L. BROWN

Henry Names Flesh Field Engineer In Eastern Area

CHICAGO—Edward A. Flesh has been appointed field engineer in the Eastern territory for the Henry Valve Co. Mr. Flesh, who will cover eastern Pennsylvania, New Jersey, Delaware, Maryland, and Virginia, plans to make his headquarters in Philadelphia.

He was formerly associated with Merchant & Evans, manufacturer of air conditioning equipment, and Mueller Brass Co., which makes valves and pipe fittings.

Sellers, Kelvinator Sales Executive, Dies Suddenly

DETROIT—Steele R. Sellers, eastern sales manager, Kelvinator Division of Nash-Kelvinator Corp., died suddenly of a heart attack recently at his home in Birmingham, Mich.

Mr. Sellers was born in Pittsburgh, May 29, 1893, and was graduated from Penn State in 1914. A veteran of World War I, he was associated with the Western Pennsylvania Power Co. and with Western Electric before joining Nash-Kelvinator. Prior to World War II he was sales manager of Kelvinator electric ranges and during the war was appointed assistant to the vice president for war production.

Mr. Sellers leaves a widow, Grace; a son, Steele Lamb Sellers; and two sisters, Mrs. William Pennell of Pittsburgh and Mrs. David H. Smith of Cochran, Pa.

He was a member and elder of the First Presbyterian Church, member of the S.A.R., the Masonic Lodge S. & A. M., the Economic Club of Detroit and the Orchard Lake Country Club.

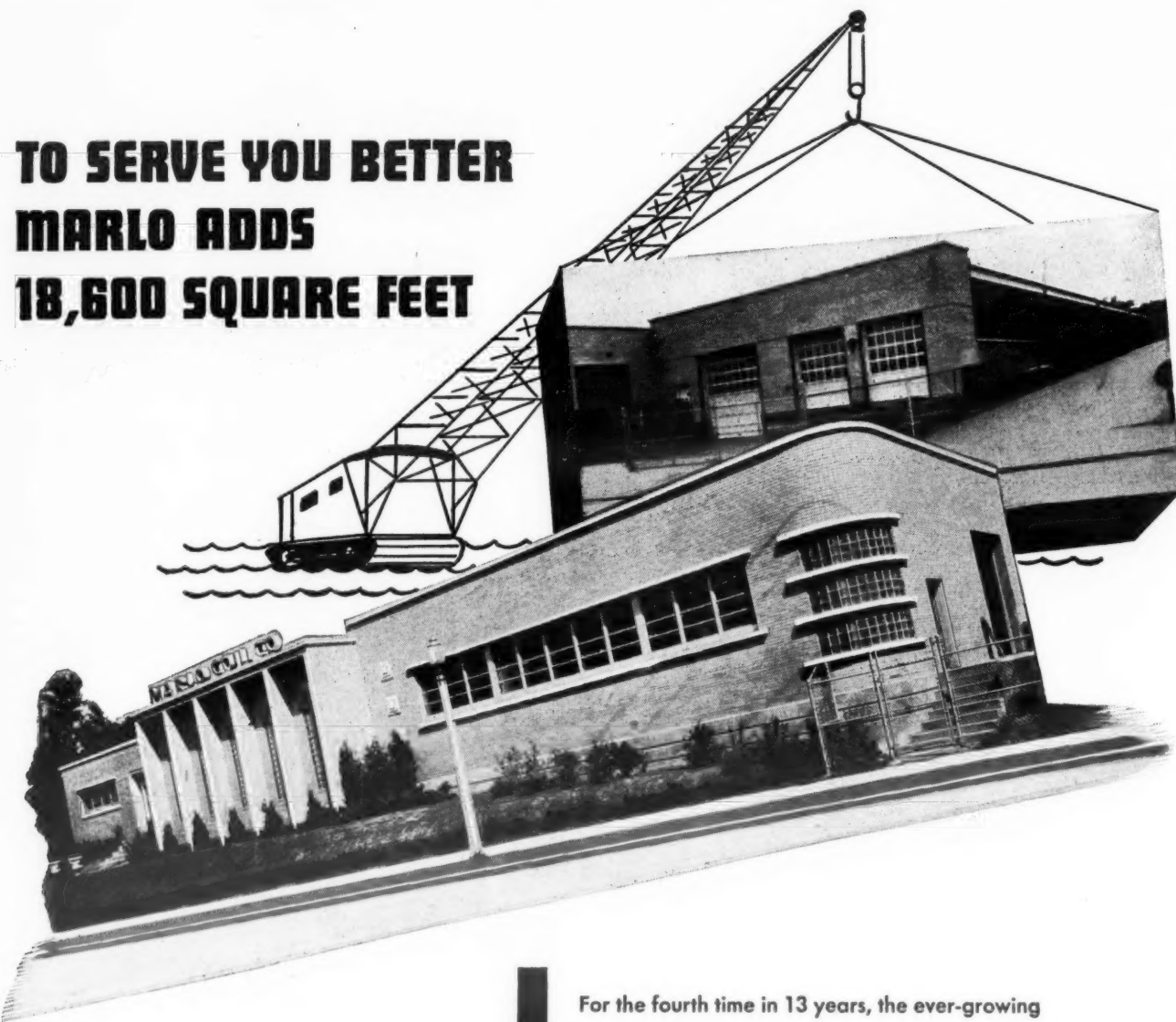
Weeks, Brown Added to Temprite Sales Staff

DETROIT—Appointment of H. B. Weeks as New England sales representative and Austin L. Brown as southeastern states sales representative has been announced by Temprite Products Corp. here, manufacturer of liquid cooling devices.

Mr. Weeks, whose territory will be all of New England, will have his headquarters at 156 Pearl St., Boston. He has worked in the refrigeration industry for 15 years as appliance sales promotional man, wholesale jobber representative, and manufacturer's agent.

Mr. Brown will cover North and South Carolina, Georgia, Florida, Alabama, and the eastern part of Tennessee with his headquarters at 507 Kennesaw Ave., Marietta, Ga. He has been active in the industry for over 10 years, first as southeastern district manager for Fedders and then as branch estimating engineer with York.

TO SERVE YOU BETTER MARLO ADDS 18,600 SQUARE FEET



MARLO

HEAT TRANSFER SURFACE

Ball-Bonded Blast Coils — Cooling and Heating • Air Conditioning and Refrigeration Apparatus • Industrial Blower Units • Unit Coolers • Evaporative Condensers and Coolers • Low Temperature Apparatus

SEE OUR NEW LINE IN CLEVELAND

For the fourth time in 13 years, the ever-growing demand for our products has required us to increase our facilities from 5,000 square feet in 1933, to a total of 42,600 square feet today.

Again we say "Thanks!" to those whose acceptance of our many products made this steady growth possible. We pledge our best efforts to continue producing the best in Heat Transfer Equipment of all kinds.

MARLO = HEAT TRANSFER

MARLO COIL COMPANY

ST. LOUIS 10, MISSOURI

NATIONAL

—one of America's foremost slant-type

DRY BEVERAGE COOLERS



in lustrous BLACK MOROCCO finish with stainless steel doors and trim or all STAINLESS STEEL top, front and sides. 4 popular sizes.

Write for catalogue.

NATIONAL COOLER CORP.

1600 Woodland Ave.

Cleveland 15, Ohio

Public Asks Grading Laws On Frozen Foods, Says Institute After Survey

NEW YORK CITY—Reports to the Frozen Food Institute from field representatives and membership that "nation-wide sentiment is running high on the desire for frozen food legislation" have prompted Institute directors to urge adoption of "a self-imposed code of ethics" by the industry.

These reports were interpreted by the directors as "solemn warning to the trade as a whole."

The Institute said its latest survey showed 83.2% of those questioned thought the frozen food industry should be governed by regulations covering standardization of grades. Standardization of packages was favored by 74.3%.

This trend for legislation was said to be the reverse of that indicated by a similar survey conducted only eight months ago.

"Thorough analysis, by the Institute Directorate, indicates consumer groups, health boards, state bureaus of weights and measures and professional reform organizations have been instrumental in creating desire for such legislation," the Institute observed. "Further analysis brings out the fact that several states are already considering, for their next legislative terms, bills introducing mandatory legislation governing frozen foods."

Carrier Sets Up Branch In Toronto for Canada

SYRACUSE, N. Y.—Carrier Engineer, Ltd., of Canada and Newfoundland, Carrier's second foreign branch to be operated as a firm, was to open this month with Charles F. Hill, of Boston, as president, according to Herman Greenwood, vice president of Carrier International.

Toronto has been selected for the new firm's headquarters. A similar firm was organized in 1939 but was abandoned during the war. The other comparable Carrier branch is in Brazil.

Mr. Hill joined Carrier in 1934.

Radio & Refrigeration Service Established In Louisville

LOUISVILLE, Ky.—A charter has been granted Radio & Refrigeration Service Co., this city, which has been incorporated with authorized capital stock of \$25,000. The principals include William H. Bomer, Clayton Johnson, and Sally Jackie-wicz.

COMPLETE CARRIER

7½ H.P. Refrigeration units. 50 or 60 cycle motors. "Fron." High and low sides in one assembled package. Also available identical units as above, operated by Continental Gasoline Engine —4 cylinder. Immediate delivery. Crated for Export. Suitable for low and medium temperature walk-in refrigerators. Air Conditioning applications. Useful in tropical climates. Also refrigerated walk-in warehouses, 1800 cu. ft. Steel and wood construction.

GENERAL REFRIGERATORS CORP.

678 Broadway, N. Y., 12, N. Y., ST 9-1222

We Manufacture Only Food Conservators

Our entire time is devoted to the manufacture, research and development of them. Write for particulars.

Master Manufacturing Corp.
121 Main St. Sioux City 4, Iowa
800,000 MASTER FOOD CONSERVATORS IN USE

A MASTERPIECE in Thirst-quenching Convenience

You're always Sure with an OASIS-built by Enco, pioneers in the electric water cooler field.

The EBCO Mfg. Co.
401 W. Town St.
Columbus 16, Ohio

Airport Plans Cooler for Frozen Food Air Shipments

PHOENIX, Ariz.—To pave the way for commercial air line delivery of quick frozen food products from Arizona to midwestern and eastern markets, an air freight cold storage and quick freeze warehouse are included in plans for expansion of Sky Harbor, the Phoenix municipal airport.

The warehouse would also be served by a railway spur, it was said.

Tentative plans for the estimated \$1,200,000 expansion have been approved by the Municipal Aeronautics Commission and forwarded to the city commission for action.

The project would be financed through a new city bond issue and participation up to 62% by the federal government, it was reported. Irrigated agricultural lands around Phoenix produce citrus fruits, melons, lettuce, carrots, and other vegetables. The possibilities of quick freezing and air freight transportation are reported to have been studied extensively here.

Graham Plans Commercial Production on West Coast

SAN FRANCISCO—Graham Industries, Inc. here, which took over the \$9,000,000 Oakland estuary plant from the War Assets Administration on Aug. 1, will devote part of the plant's facilities to the manufacture of commercial refrigeration, it was announced here.

The plant, which was operated by the Moore Drydock Co. for the government during the war, will be divided into five different business enterprises by Graham. Besides commercial refrigeration, these include dry dock activities, and the manufacture of semi-prefabricated houses, low-bed trucks, and steel furnishings for gardens.

H & H Freezers Set Up

ALHAMBRA, Calif.—H.&H. Freezers is the firm name under which Floyd C. Hood has published a certificate that he is conducting business at 335 South Palm Ave., Alhambra.

Texas Locker Plants Double In Past 2 Years

AUSTIN, Tex.—During the past two years the number of locker plants in Texas has nearly doubled, it has been reported recently by the Bureau of Business Research at the University of Texas.

Some 230 were in operation in 1944, the announcement said. Today there are 423. Dallas County with 20 plants is leader among the 186 Texas counties having locker plants. Only 68 counties have no lockers whatever.

Egg, Dairy Firms to Expand Storage Space In Nebraska

MCCOOK, Neb.—Addition of a cold storage plant for butter at Ralph Miller's dairy, and the expansion of refrigerated storage space by the McCook Egg Co. are the two commercial refrigeration installations which are scheduled for the near future here.

Lingle Refrigerator Co. Produces First Walk-Ins Built In Arkansas

RUSSELLVILLE, Ark.—The Lingle Refrigerator Co., said to be the first to manufacture walk-in type coolers in Arkansas, has been established here.

The firm will manufacture refrigerators to operate at temperatures above freezing for creameries, butcher shops, and similar enterprises, company officials said.

Initial production volume has been set at 30 coolers per week, they declared, adding that orders on hand will take the factory's entire output for the next two months. The units will be shipped knocked down to commercial refrigeration dealers.

The company is owned by the brothers, David A., Roy M., Cleo, and Martin E. R. Lingle. David is plant manager. The firm will have offices both here and in Kansas City, where Cleo Lingle formerly operated a similar plant.

Remember?

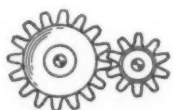


ELPECO MEN AND METHODS HAVE MADE THAT HISTORY

Exactly twelve months ago, we told the Industry that a new line of commercial refrigeration equipment would soon be available carrying the GREEN DRAGON trade-mark. Elpeco predicted that history would be made in Philadelphia. Here's proof, beyond all doubt, that Elpeco has written one of the most amazing chapters in the entire story of refrigeration.



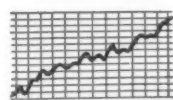
—More than fifty selected wholesalers are TODAY handling GREEN DRAGON components throughout the country.



—A complete line of integrated components, the first on record, is being marketed under the GREEN DRAGON franchise. Included, are both high and low sides, flow controls, condensers, cube makers, heat interchangers, and the famous Elpeco THERMEK surface.



—Plant equipment has been brought to a state of near-perfection with modern, specially designed tools in full use.



—Production schedules have far surpassed what seemed possible in the face of material shortages, and fair and equitable allotments of equipment have been provided to every Elpeco WHOLESALER.

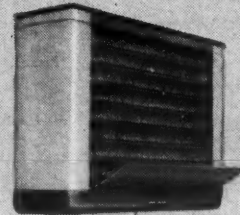
204

And Now - Expect 12 More Months of Service to the Wholesaler

ELECTRIC POWER EQUIPMENT CORP.
SHUNK STREET, EAST OF FRONT, PHILADELPHIA 48, PA.

The LINE in the SPOTLIGHT!

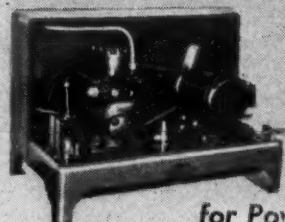
UNITRON for Cooling



THERMOTRON for Control



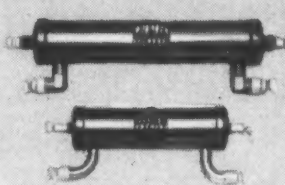
CONDENSOTRON



EXOTRON



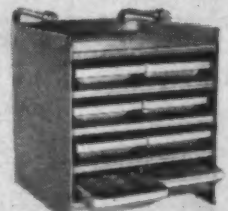
CAPACITRON



THERMEK



CUBE-O-TRON



They'll Do It Every Time By Jimmy Hatlo



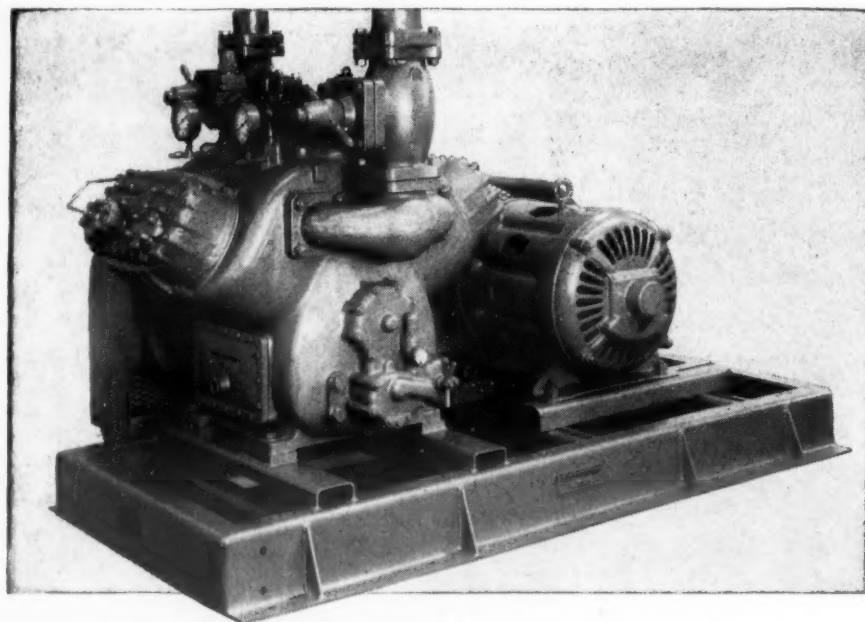
Thank To
EDDIE DUNN
RADIO CITY, N.Y.

Out With Special Privileges--Revise the Wagner Act!

WORTHINGTON

Air Conditioning and Refrigeration Report

Worthington Pump & Machinery Corporation, Harrison, New Jersey



NEW LINE OF COMPRESSORS FOR LOW PRESSURE REFRIGERANTS LOWERS AIR CONDITIONING COSTS

Answering the demand for improved equipment in the air conditioning industry, these new Worthington Compressors—ranging in size from 2 to 125 HP—combine features long sought by architects, consulting engineers and building operators.

Simplified construction reduces weight and dimensions without sacrifice of typical Worthington durability. Patented Feather® Valves . . . simplest, lightest, most reliable ever designed for compressor use . . . eliminate shock wear, noise. Accessibility of moving parts, removable bear-

ings . . . and cylinder liners, and forced-feed lubrication in larger sizes . . . lengthen life and make maintenance easy. Positive partial-capacity control helps keep operating costs low.

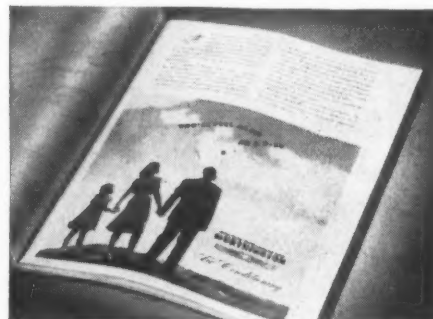
Incorporated in Worthington condensing units, these compressors team up with Worthington Multi-V-Drives, special motors and high and low pressure safety controls for low-cost installation and operation. Worthington Pump and Machinery Corporation, Harrison, N. J. Specialists in air conditioning and refrigeration machinery for more than 50 years.

*Reg. U. S. Pat. Off.



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Because Worthington makes so many of the "inner vitals" of an air conditioning or refrigeration system—compressors, condensers, pumps, turbines, valves, fittings, etc.—it is your best source of the efficient, economical "Integrated" system you want. Consult your nearby Worthington Distributor for further details.

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ONE of our subscribers—a discharged G. I.—writes us that he is "against Fascism, but is still bewildered." That's understandable.

He isn't the only one who is "bewildered much of the time." Most of us are. Too much is happening too fast, and too many things are being said too glibly for most of us to know what the score is.

One thing he shouldn't be confused about, however, is the meaning of that epithet, "fascism." In essence, it's the same thing as "communism" and New Dealism. It means: government direction of the lives of individuals. "Fascism" is just a new word for the age-old tyranny which freedom-loving people have been battling for centuries. Our great-grandfathers called it "feudalism," and emigrated to America to escape it. Jesus Christ called it "Caesarism," and died on the Cross for his brave effrontery.

The history of militant mankind is comprised of a series of Golden Ages (when men are reasonably free) which punctuate long sentences of servitude and poverty. Judging our current trend toward a "planned economy" in the light of history, we are about to begin another long sentence in the jail-house.

Call it Fascism, call it New Dealism, or call it the Divine Right of Kings—government control always turns out to be slavery and poverty.

This correspondent writes that he had a "first-hand chance to observe conditions in countries operated by Fascists," which has shown him "what can happen when businessmen and industrialists run things to suit themselves without any regard whatever for laboring men."

Are you sure, Mr. Correspondent? You invaded Italy and Germany as a conquering hero, after having blasted a path of destruction ahead. What you saw was devastation, what you encountered was starvation and hopelessness; and what you judged was the invariable end-result of government control of individual lives.

Back in 1936 the writer spent several months in Italy and Germany. "Fascism" was riding high, wide, and handsome in those two ill-fated lands at that time. Practically all our contacts in those countries were with businessmen and industrialists. They were doing their best to cope with price control, raw material priorities, government wage settlements, export allocations, and all the various types of bureaucratic hamstringing which we Americans were to experience a decade later.

Do you think those businessmen and industrialists liked it? Guess again, brother. They hated it. We know. We listened to their gripes. They put up with the bureaucrats because they had no spark of gumption. Centuries of tyranny—imposed by a succession of kings, generals, and land-inheritors—had made the European businessmen cringing and docile. Having been conscripted into an army at a tender age, they had been taught to salute their "superiors," to "do like the man says" (as an American might put it).


It's a canard that "fascism" in Europe was instigated by businessmen. That just isn't true. In Italy and Germany businessmen, laborers, and housewives simply emulated their ancestors by trying to keep in the good graces of their current rulers. That European attitude of bowing low to the king is a defeatist attitude, a species of self-immolation. We in America have proved that mankind need not be shackled, that ambitious individuals can progress fast, if encouraged and left to their own devices. By setting up a Constitution which delegated powers and provided checks-and-balances, we shackled the rulers. So we prospered.

Thomas Jefferson uttered the most revolutionary concept in all history when he said: "That government is best which governs least." Like Washington, Franklin, Madison, Adams, and other giants of that wonderful era, Jefferson believed that giving free rein to individual initiative, and limiting the powers of government to an umpire role, would be one means of putting Christianity into practice in the economic sphere.

Well, it worked out that way. Jefferson was right—for 150 years. Until this mightiest of all nations arose from a desolate wilderness, human families everywhere had usually been hungry during most of their existence. They had suffered back-breaking toil. They had enjoyed few pleasures. And they couldn't call their souls their own. Disease, famine, cold, hunger, and servitude had been their lot. (And these "horsemen of the Apocalypse" still ride herd on the fate of people who inhabit nine-tenths of the globe today.)

Until 1930, the United States of America was a living, vibrating, pulsing demonstration of the fact that liberty brings prosperity. No civilization in all the world's record has lived so well, so handsomely, so happily. The ultimate cultivation of self-reliance and individual responsibility, which flowered so grandly in America, provided all mankind with its first demonstration of real freedom. Since 1930, however, we have lost sight of our heritage. We have been falling backward into the abyss of stagnation, hunger, and poverty which government control has always brought in its train. We have been making sheepies at the siren of tyranny.

You say you want to fight "fascism." Then recognize it when you see it, friend. No matter what you call it, government life-regulation is the poorest deal of all for the common man.

Your service work
is easier...because
 Refrigeration Valves
are **DEPENDABLE**



MODEL 73RJ SOLENOID REFRIGERANT VALVE
With DUAL VOLTAGE COIL for 115-230 volts, 50/60 cycle applications — for Freon, Sulphur, Methyl. Capacity, to 7 tons Freon, liquid line.

Features that save installing time



Handy Mounting Bracket can be used in several positions



Rotating coil cover permits connecting from any of 4 sides.

Solenoids Combine Unusual Operating and Service Features...

- Service Engineers get a "double" break when they install the A-P Model 73RJ Solenoid Refrigerant Valve . . . Saving time on easier installation and building customer satisfaction by its **DEPENDABLE** long-life efficiency.

- Model 73RJ fits in small space (overall dimensions $2\frac{1}{2}'' \times 5\frac{7}{32}''$) yet it has a capacity up to 7 tons Freon (liquid line). Installation is simplified by the handy mounting bracket, providing quick, rigid mounting in several positions. Coil leads can be moved to one of **four** positions for added convenience in electrical connection by rotating coil cover.

- The Model 73RJ is "Over-Powered", and will fully open even during reduced voltage and heavy current load emergencies, because it is tested at 85% of its rated voltage. Valve opens more easily and surely because of its unique "floating Impact type" plunger (no "kick-off" spring necessary). The unique "shading coil" on the plunger eliminates vibration and noise. Operates at a pressure differential up to 180 lbs.

- Write for bulletin 401 for further details on this important A-P contribution to more **DEPENDABLE** "service-free" refrigeration. Or see it at the best Jobbers.

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STOCKED AND SOLD BY GOOD REFRIGERATION JOBBERS EVERYWHERE . . . RECOMMENDED AND INSTALLED BY LEADING REFRIGERATION SERVICE ENGINEERS

Farm & Home Freezer Manufacturing Assn. To Distribute Newly-OK'd Test Standards

PINE VALLEY, N. J.—Standards of test procedure for farm and home freezers, unanimously approved by the Farm and Home Freezer Manufacturers Association at its recent two-day meeting here, are now available for distribution, according to E. G. Vail, executive secretary, it is reported.

The association's first annual summer session, held at the Pine Valley Golf Club, was attended by 35 representatives of freezer producers.

Among new members welcomed at the business meeting were Norge Division, Borg-Warner Corp.; Kelvinator Division, Nash-Kelvinator Corp.; Fraser & Johnston Co., San Francisco; and Kel-Kold Co., Inc., Johnstown, N. Y.

Other action included appointment of a committee to study the subject of publicity, public relations, and general business standards. Committee members are: E. N. Guild, of Norge; I. A. Ponon, of Refrigeration Corp. of America; and H. L. Schaefer, of Schaefer, Inc.

Recommendations of this group will be heard at the next meeting of the association, which is scheduled to be held in Chicago the middle of November.

Plans were discussed for the publication of a single standard promotion booklet for the industry through coordinated contributions of all manufacturers.

The second day of the meeting was devoted to golf.

Here Are Proposed Test Procedure Standards For Farm and Home Freezers, Storage Cabinets

Proposed Standard for Test Procedure for Farm and Home Freezer and Storage Cabinets

FOREWORD

Farm and Home Freezers are designed to perform two definite functions. First, to freeze foods at a correct rate of freezing speed. Second, to maintain adequate storage temperature for frozen foods.

The freezing speed is governed by several factors.

The type and quantity of food to be frozen at one time.

The rate of heat flow from the food to the refrigerant due to contact, air circulation, and the size and type of containers.

The capacity of the refrigerating machine.

It should be noted that the air temperature in the freezing compartment will not indicate the rate of freezing speed without taking the above factors into consideration.

The length of time food remains in frozen storage determines the correct food storage temperature. It has been established that generally foods stored from 6 to 12 months should be maintained at 0° F. for safe preservation and edible quality. Therefore, in these standards 0° F. has been established as the internal average cabinet temperature at which to report data.

The basic functions stated above represent the mechanical means for freezing and the frozen storage of foods. In order to assure the best edible quality and vitamin content of meats, fruits, and vegetables, it is important that the type, variety, maturity, aging, and the original quality are carefully selected with a view to freezing. Proper handling prior to freezing as well as correct wrapping are also important requirements.

Manufacturer's instructions to be furnished with each Farm and Home Freezer should include complete information for the processing and storage of frozen foods as well as directions covering the maximum amount of food which should be frozen in any 24 hour period and also the maximum loading at one time.

SCOPE AND PURPOSE

The purpose of these standards is to provide a uniform procedure for determining the performance of Farm and Home Freezer and Storage Cabinets under laboratory test conditions, which duplicate in considerable measure, normal freezer usage, so that the final results will be a criterion of the performance in the hands of the user. At the same time certain deviations are incorporated to simplify the test procedure.

1. STANDARD FOR RATING THE STORAGE CAPACITY OF FARM & HOME FREEZERS:

1.0 The Storage Volume of Home Freezers shall be the volume in cubic

feet of the space arranged for the storage of frozen foods, except as modified in paragraphs 1.1, 1.2 and 1.3.

1.1 In chest type cabinets, the height measurement of storage volume shall not exceed 1" above center of highest refrigerant pass.

1.2 The volume of any space arranged for freezing shall be included in the Storage Volume since this space may also be used for storage.

1.3 In determining the Storage Volume only "usable" volume shall be considered. The volume of permanently fixed shelves and partitions, including evaporator plates, eutectic tanks, or the like, not integral with the cabinet construction, shall be deducted from the gross volume. Unusable air spaces shall also be deducted.

1.4 The Storage Volume rating may be supplemented by a Food Storage rating, which shall be 35 pounds per cubic foot of Storage Volume. (See Note 1.)

Note 1: Approximately 40 pounds per cubic foot loading is obtained with uniform size packages of chopped meat or fruits in syrup. Approximately 30 to 35 pounds per cubic foot loading is obtained with miscellaneous meats in family-size cuts. Approximately 25 to 30 pounds per cubic foot loading is obtained with an assortment of packages, including fruits, vegetables, and miscellaneous cuts of meat.

2. TEST CONDITIONS

2.1 General

2.1.1 The Farm or Home Freezer shall be assembled and set up exactly as it would be installed in service and as nearly as practicable in accordance with the intentions of the manufacturer so far as stated or known. Racks and shelves shall be in their proper places during all tests. (Except as limited by test conditions herein stated.)

2.1.2 Before the Farm and Home Freezer is put on test, it shall have had a "run-in" period of at least twelve (12) hours to assure a thorough working in of mechanical parts and equilibrium distribution of oil in the system.

2.1.3 Prior to cycling tests the Freezer shall be operated under test conditions at a given ambient temperature for a sufficient length of time to establish normal working temperature gradients or thermal equilibrium. This operation shall be followed by the test period during which the desired elements of performance are determined by observation or by measurement.

Equilibrium shall be considered to be established when the average cabinet air temperature does not vary more than 2.0° F. in the last two (2) hours of the stabilization period.

Average cabinet air temperature shall be the average of all thermocouple or thermometer readings at "cut-in" and "cut-out" of Storage Compartment temperature referred to in Drawing #1.

2.1.4 When the ambient temperature has been changed, the period of stabilization shall be sufficient to establish thermal equilibrium as defined in 2.1.3.

2.1.5 Where unit cycles during the test, the test period shall consist of an integral number of cycles; that is from the beginning of "on" period to beginning of another "on."

2.1.6 Temperature measurements shall be taken preferably with recording instruments.

2.1.7 Plates shall be relatively free of frost at beginning of each test. Excess may be removed by scraping or brushing.

2.1.8 Standard conditions of electric power supply for test purposes shall be 115 or 230 V plus or minus two (2) volts at nominal 60 cycles. The actual power supply used for tests shall be reported.

2.2 Conditions of Test

2.2.1 Each Farm or Home Freezer shall be placed on a separate solid top platform with all sides open for free air circulation under the platform. The top of the platform shall be 1 foot above the normal room floor and shall extend at least 1 foot but not more than 2 feet beyond each side of the freezer.

2.2.2 The Farm or Home Freezer shall be placed far enough away from all other objects in the room to eliminate any danger of the cabinet being at a temperature other than the ambient.

2.2.3 The Farm or Home Freezer shall be so placed or shielded to prevent direct

radiation to or from the space cooling or heating equipment and windows in test room shall be provided with suitable radiation shields.

2.2.4 Air circulation in room shall be kept to a minimum, but shall be sufficient to obtain the specified uniformity of temperature distribution referred to in 2.3.

2.3 Ambient Temperature

2.3.1 Ambient temperatures shall be measured at points located halfway between top and bottom of cabinet and ten (10) inches from the mid-point of each wall. Air inlet to condenser shall be measured at center point of condenser and 2" from condenser.

2.3.2 Ambient temperature at each point shall be maintained within plus or minus 1° F. of the specified value. This condition shall be maintained during stabilization periods, as well as during actual test runs.

2.3.3 The ambient temperature shall be measured with thermocouples, resistance thermometers, or glass stem thermometers.

2.3.4 The temperature sensitive part of the thermometric device shall have a thermal mass the heat capacity of which shall not exceed that of five (5) grams of water.

2.3.5 Ambient temperature shall be recorded at one of the above positions preferably with a recording instrument.

2.3.6 The vertical temperature gradient from the floor to a height of seven (7) feet shall not exceed 1.0° F., in any foot of vertical distance.

2.4 Internal Cabinet Air Temperatures

2.4.1 Internal temperatures shall be taken either with thermocouples or resistance thermometers. Thermocouples or temperature sensitive elements of resistance thermometers shall be in good thermal contact with such a metallic mass and their total heat capacity shall not exceed that of five (5) grams of water.

2.4.2 All sensitive elements for measuring air temperature shall be supported in such a manner that there will be at least one-half (1/2) inch air space separating the thermal mass from contact with heat conducting surfaces in the cabinet. The thermal elements shall be shielded from radiant heat.

2.4.3 Leads from thermocouples or resistance thermometers shall be brought outside of cabinet in such a manner as to interfere as little as possible with air seals.

2.4.4 Cabinet air temperatures shall be recorded at locations as shown in Drawing No. 1. In case of interference, the temperatures measurements may be taken not more than 1 inch from indicated positions. If interior arrangements do not conform with those indicated temperature measurements shall be taken at selected locations and these locations reported.

In multiple compartment type Farm and Home Freezers where one or more compartments are designed as "freezing" compartments, the average temperatures of the "freezing" compartment or compartments and the average temperature "storage" compartment or compartments shall be taken and reported separately.

2.4.5 The average cabinet air temperature for each compartment shall be the average value of the averaged temperatures measured at the specified locations.

2.5 Head and Suction Pressure

2.5.1 Suction pressure shall be recorded graphically or shall be taken with an indicating instrument at the instant before the compressor motor starts and stops, or at suitable intervals during the cycle.

2.5.2 Head pressure may be recorded graphically or may be read by an indicating instrument while motor is running. Head pressure readings and recordings shall be optional.

2.6 Instruments

2.6.1 Temperature measurements shall be accurate to 0.5° F.

2.6.2 Watt hour meters shall be accurate to within plus or minus 0.5% and readable to 0.01 kilowatt-hours without estimating fractions of a division.

2.6.3 Automatic voltage regulator shall be accurate to within plus or minus one (1) volt.

2.6.4 Operating time of unit shall be obtained by means of a synchronous self-starting electric clock or a similar type integrator.

3. FULL DOWN TEST

3.1 Purpose

3.1.1 To determine if the cabinet will pull down satisfactorily to below 0° F.

(Concluded on Page 15, Column 1)

??E!!-X-! Hey, Thermal! This blankety-blank valve--

Cut the rough talk, Scruffy--use a Tenney TS-1 and your face will light up with a smile, too.

Smiles of satisfaction—that's what you want. That's what you'll get, too, when you use Tenney TS-1 Thermostatic Expansion Valves—they lighten your burdens as they smoothly do a real job.

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QUICFREZ Model No. 1245 12.5 Cu. Ft. with Separate Freezing Compartment and Divided Storage.

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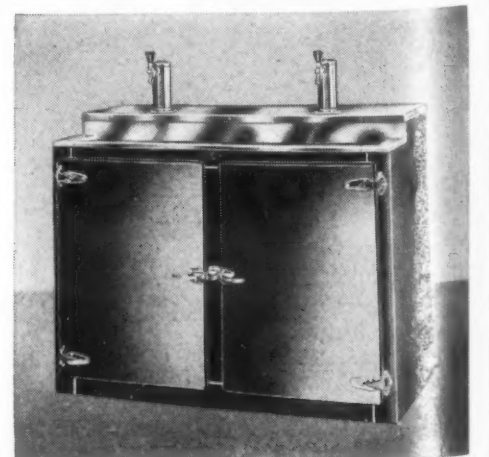
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PERLICK BRASS CO.
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MILWAUKEE 10, WIS.

Standard Testing Methods for Home Freezers

(Concluded from Page 14, Column 5)

average storage air temperature at 115 volt power supply in a 110° F. ambient.

3.12 (Optional) To determine the average storage air temperature at which condensing unit balances out, under continuous operating conditions, or to determine minimum terminal temperature gradients.

3.2 Conditions of Test

3.21 Test shall be run at 110° F. ambient temperature.

3.22 General conditions shall be as outlined in Section 2.

3.24 For Pull-down test the temperature control device shall be shorted-out or blocked in "closed" position for continuous operation.

3.25 Temperature measurements taken at points specified in item 2.44 shall be taken to locate the range of temperatures within the storage compartments.

3.26 Indicated wattage, suction pressure, head pressure (optional) and time shall be recorded as fast as possible for first few minutes until the "peak" load conditions are passed. Fewer readings thereafter.

3.27 Continue the test until three consecutive storage temperature readings show no further change.

3.28 Cabinet lids of doors shall be kept closed during each test.

3.3 Data To Be Reported

A. Ambient temperature, every 30 minutes.

E. Time for average storage air temperature to reach "F".

C. Cabinet air temperatures.

1. Read every 15 minutes during pull down, until three duplicate readings are obtained.

D. Head Pressure.

1. Read every 15 minutes during pull down.

E. Suction pressure.

1. Read every 15 minutes during pull down.

F. Indicated Watts Input—Read every 15 minutes.

4. NO-LOAD TESTS

4.1 Purpose

To determine no-load operating characteristics at ambient temperature of 90° F. The determination of no-load operating characteristics at other ambient temperatures shall be optional. Operating characteristics in very low ambients will be of interest in some instances.

4.2 Conditions of Test

4.21 General conditions shall be as outlined in Section 2.

4.22 Temperature measurements shall be taken at points and as specified in item 2.44.

4.23 Test shall be run under normal operating conditions (without freezing compartment fan) and with temperature control adjusted for 0° F. Average (average of average "cut-in" and "cut-out") storage compartment temperature. Maximum permissible temperature in warmest part of compartment shall be plus 5° F.

4.24 Recording of test data shall start when cabinet is at equilibrium or in case of irregular cycles, when 4 or 5 duplicate cycles are obtained.

4.25 Data shall be recorded for one or more test periods of approximately six (6) hours, taking an integral number of cycles.

4.26 If temperatures are taken with an indicating instrument they shall be recorded at the "on" and "off" of the motor. Ambient temperature shall be recorded every thirty (30) minutes.

4.27 Repeating tests at 40°, 70°, and 110° F. ambient temperatures shall be optional. Allow 12 hour stabilizing period between tests when repeated.

4.28 After completion of test with control set at normal, repeat with control set at coldest setting; at warmest setting. These repetitions shall be optional.

4.3 Data To Be Reported:

A. Ambient temperature.

B. Temperature Control device setting—ON & OFF of motor.

C. All individual cabinet air temperatures (see item 2.44) Storage and Freeze Comp.

1. On of motor.

2. Off of motor.

D. Average storage compartment and Freezer compartment (if any) air temperature (see item 2.45).

1. On of motor.

2. Off of motor.

E. Head pressure.

1. ON of motor and every minute during run of cycle for 3 cycles.

F. Suction pressure.

1. On of motor and every minute during running cycle for 3 cycles.

G. Energy consumption per 6 hr test. Calculate and report KW hrs. per 24 hours from energy consumed during test,

taking an integral number of cycles.

H. Per cent of running time.

I. Calculate and report the number of cycles per hour (or minutes per cycle).

5. WATER FREEZING TESTS

5.1 Purpose

To determine the operating characteristics of the Farm or Home Freezer when freezing, with 50% load in storage space.

To determine the maximum load that can be placed in the freezer that will not raise storage contents over 5° F.

5.2 Conditions of Test

5.21 General conditions shall be as outlined in Section 2.

Cabinet temperature and cycles shall be stabilized before starting test.

5.22 Storage compartment shall be 50% loaded, based on 35 lbs. ice (in milk carton) per cubic foot of total cabinet volume.

5.23 Test shall be run with temperature control device set in the freezing position or as per manufacturer's instructions.

5.24 Racks, if supplied by manufacturer, shall be in place.

5.25 Fan (if any) shall be operated during freezing. If portable it shall be located according to manufacturer's directions.

5.26 Ambient temperature of 90° F. shall be used for water freezing tests.

5.27 Clear fresh tap water at 90° F. shall be used. Water shall be placed in standard rectangular quart size paraffined paper milk cartons to within 1/2" of full. Cartons shall be "L x W x H".

5.3 Procedure

5.31 Calculate the total available daily freezing capacity in BTU based on 16 hours operation per 24 hours, i.e., compressor capacity less cabinet leakage and less fan input. Convert to pounds of ice. The freezer compartment shall be loaded with this poundage of water in cartons.

5.32 Place thermocouples or resistance thermometers in container so that sensitive metallic element is located as nearly as possible to center of material to be frozen and shall be completely submerged in the carton contents.

5.33 Temperatures shall be taken in those containers which are to be located in the warmest and coldest positions in the freezing compartment. Take readings in three or more containers.

5.34 Water in container shall be considered frozen when solidified. Heat extracted shall be based on 90° F. water and 32° F. ice.

5.35 Take cabinet readings on the "OFF" cycle. Then load freezer compartment. Report time when freezer loaded, also time when units starts. Continue with test.

5.36 Each test shall continue for 16 hours.

5.37 If, at the end of 16 hours, some of the load is unfrozen, break open cartons and collect all water. Record weight of water collected and note locations of unfrozen cartons in freezer space. Record weight of ice frozen.

5.38 Temperature measurements shall be taken at points and as specified in item 2.44 insofar as product load will permit. Product load temperature shall be taken with thermocouples buried in cartons located at center of warmest side wall also in top layer center and bottom layer center.

5.39 Allow cabinet to stabilize for 12 hours (operate on cycles at zero degree setting) before starting a new test.

5.4 Data To Be Reported

The following data are to be reported for each test:

A. Weight water per container and number of containers per loading.

B. Diagram of arrangements.

C. Time required to freeze 1st carton, also last carton.

D. Weight of unfrozen water at end of test, if any.

E. Time fan was operated.

F. Killowatt-hours used by fan.

G. Size load in storage compartment (Total pounds of ice).

H. Killowatt-hours used in freezing ice.

I. Length of time until first normal cycle, if any.

J. Per cent of running time during freezing to conditions stated in 5.33.

K. Head pressure—every 30 minutes (optional).

L. Suction pressure.

1. During freezing—every 15 minutes or "ON" and "OFF" if cycling.

M. Cabinet temperatures, record every 15 minutes.

N. Power above normal to freeze, expressed in kilowatt-hours per pound.

6. SWEATING TEST

6.1 Purpose

To determine sweating characteristics of the cabinet under high relative humidity conditions.

6.2 Conditions of Tests

6.21 General conditions shall be as outlined in Section 2. Cabinet set-up shall be same as for No-Load test.

6.22 Four Thermocouples shall be soldered to copper discs made of 24 gauge sheet copper 1/2 inch diameter. The discs shall be attached to the exterior of the doors, or lids covering coldest compartment and the mullions, (if any) in a location adjacent to the gasket of the lids.

6.23 Set room ambient to 90° F. and relative humidity to 75%.

6.24 Operate cabinet for 12 hours preceding test with thermostat set to give 0° F. average air temperature in storage compartment.

6.3 Procedure

6.31 Start test after cabinet temperatures and cycles are stabilized.

6.32 Take Psychrometer readings of room air directly on top of cabinet, or adjacent to doors, to determine relative humidity and dew point temperature from psychrometric chart.

6.33 Observe and record whether or not the surface of the cabinet is sweating at any point.

6.4 Data To Be Reported

A. Ambient temperature.

B. Cabinet surface temperatures (cold-est).

C. Average Cabinet air temperatures (Any of average "Cut-in" and "Cut-out" readings).

D. Wet and Dry bulb temperatures of room air—Psychrometer and relative humidity.

E. The degree and location of condensation; areas covered.

F. Make an outline drawing or photograph of cabinet with areas of sweating marked clearly on same and notation of room dry bulb temperatures and relative humidities listed thereon.

7. POWER AND SHUT-OFF TEST

7.1 Purpose

To determine the Farm or Home Freezer warm-up characteristics in the event of power failure and the length of time a cabinet can be without power, without thawing of the stored frozen food.

7.2 Conditions of Test

7.21 General conditions shall be as outlined in Section 2.

7.22 Ambient temperature of 90° F. shall be used.

7.23 Tests shall be conducted under one load condition.

A. Storage compartments 50% loaded.

B. Cabinet surface temperatures (cold-est).

C. Average Cabinet air temperatures (Any of average "Cut-in" and "Cut-out" readings).

D. Wet and Dry bulb temperatures of room air—Psychrometer and relative humidity.

E. The degree and location of condensation; areas covered.

F. Make an outline drawing or photograph of cabinet with areas of sweating marked clearly on same and notation of room dry bulb temperatures and relative humidities listed thereon.

7.3 Data To Be Reported

A. Ambient temperatures.

B. Product load temperatures—every 15 minutes (see Item 7.24 above).

C. Time required for first thermocouple ice block to reach 25° F.

D. Time required for the last thermocouple ice block to reach 25° F.

Loading based on 35# of ice per cu. ft. of total cabinet volume. Ice to be in milk cartons.

7.24 Place a thermocouple in the center of each of four quart containers of water and freeze solid. In placing the ice load in the cabinet, spot these thermocouples blocks in strategic places, as specified herewith.

A. Bottom layer storage, centered.

B. Top layer storage, centered.

C. Next to bottom layer storage, at side against refrigerated plate. (Center of plate.)

D. Next to bottom layer storage, at side against nonrefrigerated plate.

7.25 Prior to each test, conditions specified under 2.13 shall be obtained.

7.26 Start warm up test at the beginning of an "OFF" cycle. Disconnect power supply. Continue test until warmest package reaches 25° F.

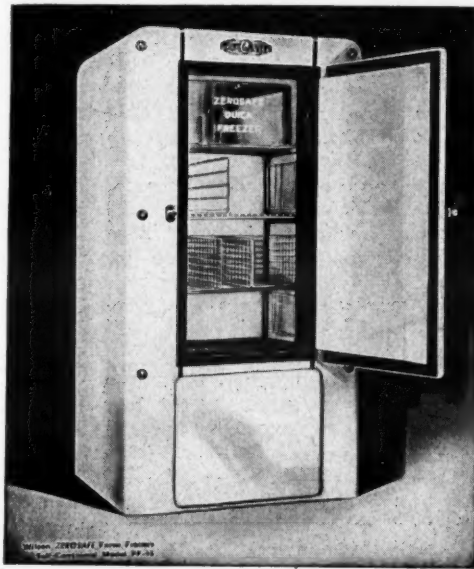
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How a Big Refrigeration Contracting Company Operates, Part 3: Shop Procedure, Parts Handling, Final Billing

Editor's Note: This is the third, and final part of a story of how one large refrigeration contracting firm operates. The three main activities of a refrigeration contractor are installation, maintenance, and repair. Johnston Refrigeration Construction also distributes and retails, but that's another story. These three articles are a study of the company's servicing activities.

This Part III is a brief picture of the company's shop procedure, the parts department's operations, and how final billing is handled—with a short footnote on the warehousing and sales setup.

SHOP PROCEDURE

The shop and the parts department are coordinated under one man: Don Hoover, the company's manager of operations. But each of the departments has its own foreman. For the shop it's Frank Kennedy, with two men working on motors and three on general repairs. For parts, Bill Leveque.

A shop order (job ticket) is written in duplicate on every unit or part coming into the shop for repair. If it's an exchange job, or one of the company's loaners, no special tag goes on it. But if it's going back to the customer it gets a big green tag labeled: "Not Our Property."

A unit entering the shop is receipted on a receiving slip and the customer gets a copy of this. These slips are numbered, and filed by number, but are not used after that. The receiving slip's number is entered on the job ticket for reference only.

From that point on, the job number is the controlling number.

The white (first) copy of the job ticket stays with the unit wherever it goes in the shop. The yellow (second) copy is filed in the shop office, and its record of the unit's serial number is insurance against confusion if the white copy should get lost.

All materials and parts drawn from the parts department for repairing a unit are listed on the job ticket. The repairman fills in his own name, the date, and the hours he has worked on that job. An order number is stamped on both job ticket copies, and he enters that number on his own time card, opposite the hours worked. The hours for the job should agree on the two records.

If the whole unit, or any part of it, has to go to the factory, the man last working on the job holds the job ticket, and clips it to his board. The yellow copy still stays in the

office. When the factory returns it, the unit goes back to the same repairman, and on through the shop from there.

Hermetically sealed units don't come into the shop at all. Shipping takes charge of them when they come in, and sends them on to the factory.

The shop has a regular exchange service on units made by Kelvinator, Leonard, and Stewart-Warner. These units are taken in and a completely rebuilt replacement issued for a set price. Prices vary according to the size (exchange is made according to the horsepower, not the manufacturer), and the units are guaranteed for 90 days.

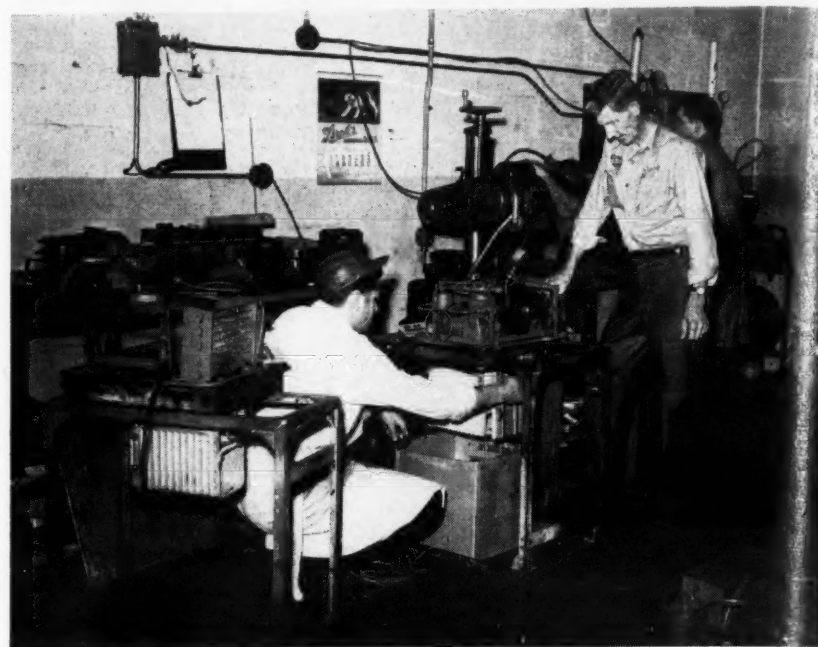
No exchange system has been set up for Admiral refrigerators, since these are postwar models and haven't started needing replacement yet. Eventually they will, and the company probably will set up a similar exchange policy when they do.

All work is costed for monthly inventory. Every part used, even gaskets, is checked for final totals by the office; labor is added in, and the final figures entered—in red for the company's costs, in black for the price charged.

The completed work order goes with the unit to the stock room, with a notation as to final handling of the repaired unit—to be delivered as is, or to be reinstalled on the job, to be picked up by the customer's truck, etc.

Installation of new units, or re-

Testing . . 1, 2, 3, 4 . . .



Frank Kennedy, the shop foreman (right), checks with Ted Motyka while one of the shop units is getting a running test in the course of being completely overhauled. In the background, Ken Hann is testing another unit for possible leaks.

installation of heavy commercial units, is handled by special installation crews who work directly under Bob Leveque. There are three installation trucks, each with special facilities and a complete line of parts, and five installation men for the total crew.

After final repairs have been completed on one of these heavy units, or when a new one has been sold to a customer, Mr. Leveque writes up an installation order, including whatever major parts or equipment will be needed.

He then goes out to the location, and checks with the customer. They agree on the day for installation, and Mr. Leveque sees that a permit is gotten for the job. These are issued by the city's department of Building and Safety Engineering, and that department also inspects the finished job.

The completed order, including all the figures on the job, goes to the billing department, and before filing it away under finished business, this department types up a form that is forwarded to Mr. Johnston.

It's a looseleaf form, worked out by him and filed in a notebook on his desk, showing all the details and costs on that installation, including the final and important figures of total cost, gross profit, burden, and net profit. They add up, at a moment's notice, to the total number of jobs the company has installed in any given period, and the costs and profits represented.

The shop itself is about 30 ft. by 55 ft. Fluorescent lights are over each work bench, and the battleship gray of the lower walls becomes a lighter gray above the eye line.

The gradual addition of new equipment is practical and profitable, with this company. The latest addition is a surface grinder that replaces hand lapping on valve plates. By hand, the job took an hour and a half; with

the machine it's about half an hour—a lot faster, and with perfect accuracy, according to Mr. Kennedy.

The shop's work is almost entirely commercial; there are few household units that can't be fixed on the job. Stewart-Warner units are coming in less and less, Admirals hardly at all so far. By far the greatest part—better than 95%—are G-E and Kelvinator, the heavy units, according to Mr. Kennedy.

PARTS DEPARTMENT

The department carries parts for all standard commercial units, and full lines for Kelvinator, Leonard, Admiral, and Stewart-Warner household systems. Foreman of the department is Bill Leveque, brother to Bob, and it takes him and four counter men to handle orders during the busy part of the day.

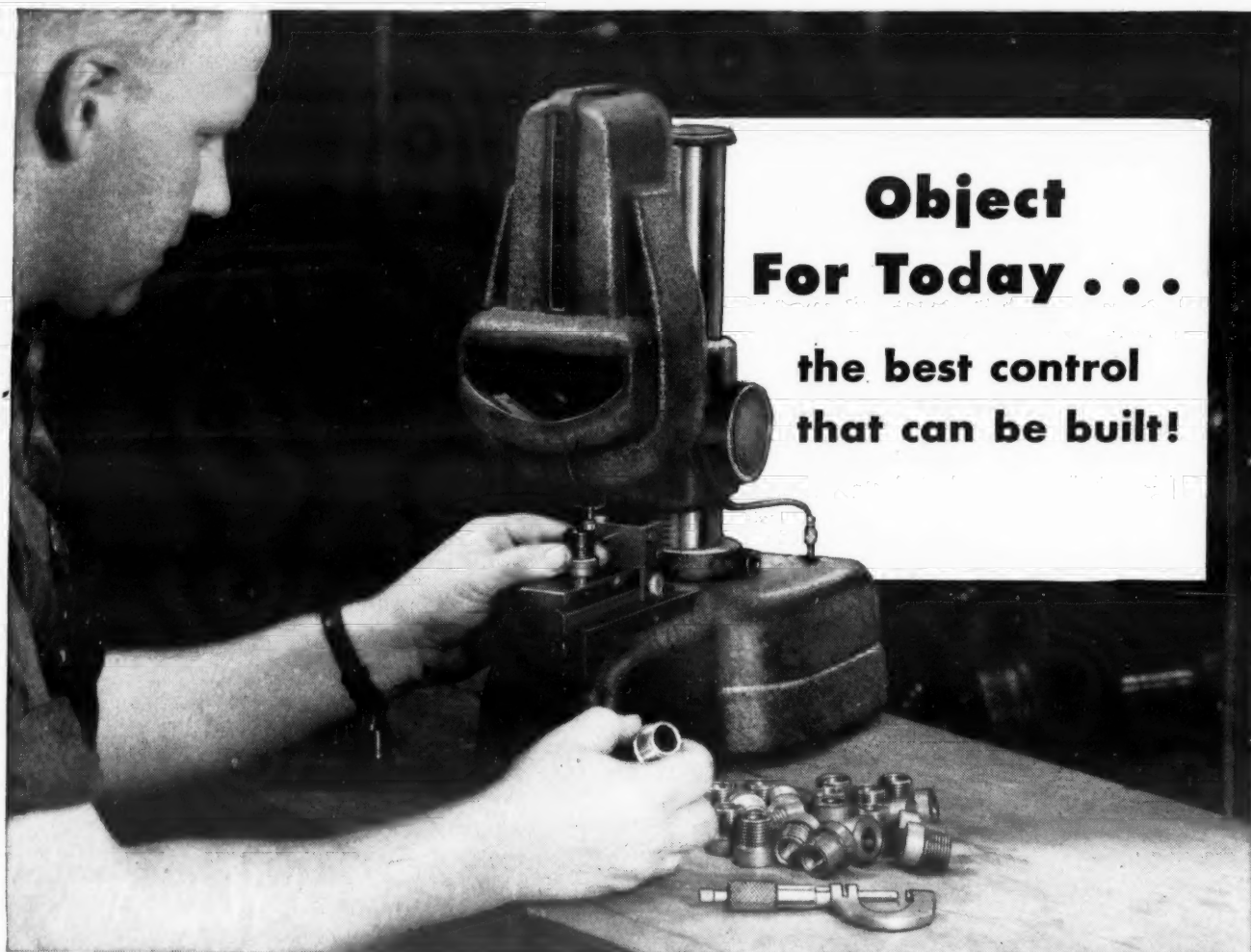
That time is between 7:30 and 8:30 in the morning, when all the service men need their car stocks refilled and the special parts that specific jobs call for. The replacement routine is automatic: They hand Bill their invoices from the day before, and the parts crew brings out all the parts listed as used on those jobs.

Any other parts must be called for by requisition, and an old part has to be handed in for every one of these drawn. These special parts requests are listed in a card file under the name of the man drawing them, and they're canceled out as soon as an invoice shows he has used them on a job.

Car stocks are completely inventoried once a year, or whenever one of the men leaves the company.

Items with the biggest turnover are glassware (defrosting trays and shelves), driers (which are replaced whenever the nature of the repair job indicates any doubt), and refrigerant gas.

(Continued on Page 17, Column 1)



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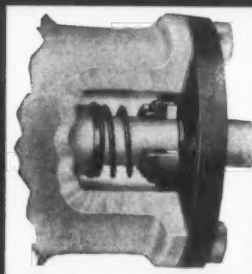
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Four Copies of Each Service Invoice Make Final Billing Accurate, Faster

(Continued from Page 16, Column 5)

The parts department has to carry an unusually large line of compressors and motors, because of the company's sizable exchange business; and a lot of Kelvinator and Leonard stainless steel evaporators, to replace the porcelain ones used during the war.

In physical dimensions, the parts department runs about 30 by 60 ft. New bins are being built for the growing stock of G-E commercial and Admiral household units. The emptiest bins are those for complete units and small motors, which are still hard to get in quantity.

The most convenient item is a circular revolving bin just behind the counter. It carries nothing but flare fittings, but more than 60 different kinds of them.

"In the morning that one really spins," says Bill Leveque.

FINAL BILLING

The business office, under Ray

Smith, ties up the final ends on all these activities that have begun in the parts department, in the shop, and in the field.

Different code numbers, for instance, are assigned on the basis of how they were paid for—or are going to be paid for.

You recall that invoices on the job are made out in four copies. One of these, the fourth copy, stays with the customer as a receipt if she paid cash. But at least three, and possibly four copies will go through the office manager's hands for final OK.

What does he check them for? For any possible errors in addition, for items that may have been left out, for anything that looks wrong to him.

Why does he have to check all existing copies? Because they were all made out at the same time, and an error on one is on every one of them.

What happens to the four copies? The fourth copy, the white one, is

left with the customer, or destroyed. It exists only for one purpose: to act as a cash receipt. If it wasn't used for that purpose, it isn't needed at all.

The third copy, which is pink—the company has found that a different bright color for each invoice copy makes handling easier and faster—is the one that goes out by mail with the final bill as an itemized account of the charges. If the call wasn't a charge, this copy has no further purpose and is destroyed.

You might ask, why not use only three invoice copies, and make the third one serve one purpose or the

other; you never need them both. True. But it's a lot less confusing, for the service man on the job and for the clerk in the accounting office, when each color means exactly one kind of a business deal, and nothing else. Experience has proved it, many times, states Mr. Johnston.

The second copy, the blue one, stays in the business office for its permanent file. It remains as the only original official record, and it never leaves the office. It's strictly a closed file.

The first copy, which is yellow, comes up to the business office only

(Concluded on Page 18, Column 1)

Installation Figures Report

| | |
|----------------------------|------------------------------|
| Installation number: | Date of sale: |
| Location: | Date of billing: |
| Billed for: | Number of billing: |
| Costs: | Amount of billing: |
| Materials: | Free service included: |
| Other costs: | Sales tax: |
| Labor: | Balance of billing: |
| | Total costs: |
| | Gross profits: |
| | Burden: |
| | Net profit: |

This is the looseleaf form typed up by the billing department for Mr. Johnston. The important totals are final cost, gross profit, burden (overhead and operations costs), and net profit remaining. This record will give him, in a few minutes' time, the total number of installations made in any given period, and the costs and profits represented. Size: 8½ x 11 in.

JOB TICKET

No. 13501

Johnston Refrigeration Construction

DATE (Ticket is filled out)

Work to be done for ("Our Stock" or Customer's name)

R.S. # (Receiving Slip Number)

INSTRUCTIONS: (Nature of inspection or repair)

MATERIAL USED:

(Listed as drawn from parts department)

MATERIAL USED:

Shop Hours On Job

| Date | Name | Hours |
|-----------------------------------|------|-------|
| (Hours must check with time card) | | |

This is the shop's invoice on all work done. It specifies whether or not the unit is the company's property, what work is to be done, and carries the same kind of job number (upper right) required on a service invoice. Materials drawn and hours spent on the job are filled in by the repairman.

The form is issued in duplicate. One copy stays with the job wherever it goes, the other is filed in the shop office as insurance against loss of the other copy. Size: 8½ x 11 in.

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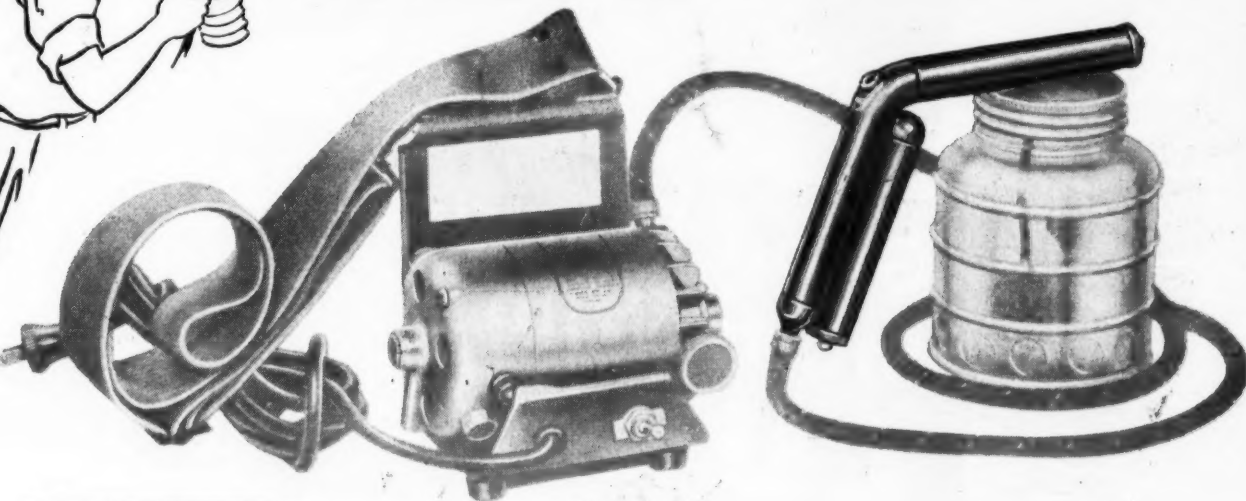
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and
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Company Plans to Increase Lines, But Servicing Will Remain Chief Activity

(Concluded from Page 17, Column 5) long enough to be checked with the other copies. Its final destination is the lookup file, where it can be checked for reference by anyone who needs its information. For that reason it has to get to that file as soon

as possible, and is cleared through the parts department, the dispatcher, the coordinator, and the business office with all possible speed.

WAREHOUSING & SALES

The company began construction on

The Parts Department



In the foreground Bill Leveque, the parts foreman, is serving a customer. Near the post beyond them is the boss, George L. Johnston, talking with Frank Houston, of the Fenton Electric Co., Fenton, Mich.

its new building, to act as a showroom, additional office space, and as a warehouse, during last August. Location is just around the corner from 6219 Lincoln, at 1420 Holden.

The shortage of materials kept construction going a lot longer than planned. The building was supposed to be finished by Jan. 1 of this year; instead, the building itself wasn't finished until May. A few details like the heating plant and a hot water tank are still wanting.

The new building is two stories high, 115 ft. deep by 28 ft. across. The showroom takes up the front 46 ft., with the offices in the same space upstairs—the accounting and billing departments, and Mr. Smith's office.

Back of the firewall is the warehouse, 28 ft. by 67 ft. Heavy equipment is stored downstairs, lighter parts upstairs—tubing, belts, crated small parts, and the like. A 1,000-lb. lift, movable because it is on wheels, takes the upstairs stock off the truck tailgate and hoists it to the second story entrance. The flooring up there is good for 200 lbs. to the square foot.

The showroom will display units in the various lines Johnston Refrigeration handles—Chrysler and Koppin meat display cases, General Electric packaged air conditioners and water coolers, Puffer-Hubbard reach-in boxes, and Victor bottle coolers, freezers, and milk coolers.

The company retails these within the greater metropolitan area, and wholesales to 12 dealers in Ann Arbor, Fenton, Highland, Monroe, Mount Clemens, Utica, and Ypsilanti. All of them are Michigan towns north and west of Detroit.

But servicing will keep on being the company's main business.

Checking Up on the New Features



J. A. Fox, G-E product specialist on refrigerators, explains features of a new model to Service Managers W. W. Waler, Salt Lake City; F. E. Isbel, Boise, Idaho; and R. Vigus, Butte, Mont., at distributor service manager meeting held by G-E's Product Service Division at San Francisco.

G-E Is Expanding Its Dealer Service Training Program

BRIDGEPORT, Conn. — General Electric distributor service managers and other key service personnel in Kansas City, San Francisco, Atlanta, and in this city recently attended a series of four new G-E product service meetings, reports W. C. Noll, manager of the technical and educational sections of the company. Lasting five days, each meeting covered the servicing of all G-E major appliances. Actual products, some of which were initial production line samples, were used in all the presentations.

Included were General Electric's new automatic dishwasher, home freezer, and line of storage cabinets. Special cutaway mechanisms, sample parts, and various charts also were employed.

As an aid to the 200 service personnel who attended the classes, special notebooks were distributed containing topical outlines of each presentation with space for additional note taking, Mr. Noll said.

Each meeting lasted five days, with the first four days consisting of detailed discussions of the products themselves, suggestions for meeting current service problems, and explanations of the design recommended.

"How to do a more effective servicing job" was the general topic for the fifth day of school. The value of a competent service organization was emphasized, and the need for merchandising the services of product service groups was discussed.

Importance of a service department in relation to new sales prospects and the brand-consciousness that it creates was stressed.

Climaxing each meeting was the distribution of a complete "service training book" for use by distributors in conducting service schools for dealers, according to Mr. Noll.

The book presents all the information of G-E's appliance service training library, and gives detailed school outlines on all G-E appliances from the earliest models up to those which will be on the market within the next six months.

C. E. Ring, supervisor of the field service section, described the meetings just concluded as refresher courses on older equipment and informative sessions on new models, going on to say that G-E has always emphasized the appliance service and training job since the start of the household refrigeration industry in 1927-28.

General Electric dealers will continue to receive the most complete service training through their distributors with the help of G-E service representatives and training material.

The company intends to carry on and expand the many training mediums and activities developed prior to and during the war, including sound films, new types of charts, special display parts, home study courses, detailed service manuals, service handbooks, and special service meeting plans, he continued.

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Refrigeration Problems And Their Solution

By P. B. Reed

For Service and Installation Engineers



Manager, Refrigeration
and Air Conditioning
Division, Perfex Corp.

Tracing Trouble To Service Valves

A distributor for commercial refrigeration equipment sold a 10-by-12-ft. walk-in cooler with a flash type coil and a 1-hp. air-cooled "Freon-12" unit to a market. It was installed by an independent service company.

The electrical work was all completed, the coil hung, the thermostatic expansion valve in place, the lines run and all joints made, by late one afternoon, but putting the system into operation was left until the next day since it would be several days before the store was to be opened. The low pressure control was set at 32 p.s.i. cut-in, and 18 p.s.i. cut-out.

INSTALLATION IS STARTED

First thing the following morning a vacuum was pumped on the system and the Receiver Service Valve was "cracked" enough to build up a pressure of about 50 lbs. per sq. in. in the lines and the flash coil and the whole system was tested for leaks. One small one was found and repaired and the system was ready for its charge.

The receiver service valve was opened wide. It was expected that additional "F-12" would have to be put in, as the tag on the condensing unit stated that it was shipped with 6 lbs. of refrigerant in the receiver. A new, 20 lb. cylinder of refrigerant was connected to the Suction Service Valve and placed in a bucket of warm water so as to keep the pressure up.

Alternately the cylinder was taken out of the warm water, and the Suction Service Valve throttled to keep the suction pressure down to 30 lbs. per sq. in. or less to avoid overloading the motor.

The receiver had no liquid level gauge or test valve on it, so when the lines were run, a sight glass had been installed in the liquid line near the Receiver Service Valve.

Refrigerant was added for what seemed to the service engineer a long time before he got solid liquid in the sight glass indicating that he had a minimum operating charge. However, he wanted a small surplus or reserve charge in the receiver of at least 2 or 3 lbs. so he continued to add some charge.

EXCESSIVE DISCHARGE PRESSURE

The service engineer estimated that he had only put in a pound or less when the high pressure gauge started going up rather fast. He shut off the cylinder valve and took the cylinder from the water, but the head pressure stayed up around 160 p.s.i. which he knew was too high for an 80° room, even though the refrigerator was warm.

By this time, the suction pressure was down to 23 p.s.i. and he found the evaporator was only about two-thirds frosted, so he opened the expansion valve some (increased its super-heat adjustment) and watched the coil a few moments until it was almost all frosted. Then he went back to the machine and found the head pressure down to about 140 p.s.i. which was about what it should be.

BUBBLES AGAIN

But by this time bubbles were again showing in the sight glass indicating that the receiver was dry of liquid refrigerant. He concluded that opening the expansion valve had taken the pound or less reserve that he had put in so he opened the cylinder valve and put the cylinder back in the pail of warm water.

It took but a short time for the sight glass to become free of bubbles; as before, the head pressure suddenly started back up to 160 p.s.i.

The service engineer watched it for awhile until before long the suction pressure got down to about 20 p.s.i. and at about this same time the head pressure dropped to about 135 p.s.i. and very soon after the bubbles showed up again in the sight glass.

CHARGE CRITICAL; HEAD PRESSURE ERRATIC

Again he added refrigerant, again the head pressure jumped up to 160 and finally to 170, and stayed there.

He decided there must be something wrong with the expansion valve so he decided to change it. He shut off the Receiver Service Valve and started to pump the job down. At once the discharge pressure shot up to over 200 p.s.i. so he had to stop the machine.

Then he got curious as to how much "Freon-12" he had put into this installation. He disconnected the "Freon" cylinder and weighed it. He found that he had only 3 lbs. left in the cylinder and had actually put in 17 lbs., which with the 6 lbs. originally in the receiver of the condensing unit made 23 lbs. of "Freon-12" in the system. He knew that this was too much, but he could not understand where it went. Any less showed bubbles in the sight glass; any more showed up as an overcharge. It acted much like the critical, balanced charge of a high-side float.

THE SUPERVISOR COMES

He called in the Supervisor and explained the situation to him.

"Well," said the Supervisor, "the lowside surely can't hold more than about 6 lbs. This means that the 17 lbs. you have put in is in the liquid line and the receiver. The liquid line is short and only holds a fraction of a pound, certainly not over a couple of pounds, so that means that at least 15 lbs. must be in the condensing unit."

He did a little calculation and decided that, "The receiver won't hold more than about 13 or 14 lbs. so it must be full and a pound or so left over for the condenser."

"If so," questioned the service engineer, "why are there bubbles in the sight glass, and why is the charge so critical?"

"I can't answer those questions right now," replied the Supervisor, "but one thing I do know: there is more than enough refrigerant in the system. In fact, it looks as if the receiver is full and in addition there are a couple of pounds or so up in the condenser. That is what is causing the head pressure to be so high. There has got to be something wrong with that receiver."

THE RECEIVER IS SUSPECTED

They looked the receiver over. It was the horizontal type mounted under the base of the condensing unit. It had two service valves, both mounted in the top of the receiver. The Receiver Valve to which the liquid line was connected was at the outlet end, and the Condenser Valve to which the outlet tube from the condenser was connected was at the inlet end of the receiver.

"The Receiver Valve," said the service man, "is supposed to have a tube on it that goes down almost to the bottom of the receiver so that it draws liquid from the bottom, but the condenser valve is only supposed to feed liquid into the receiver from the

top of the receiver, so if the receiver had been put in end for end at the factory it would make the condenser valve the receiver valve and that would mean that the receiver would have to be full before it would feed."

"You've got something there," replied the Supervisor, "but that couldn't be, because the two valves are mounted at right angles to one another so the condenser connection wouldn't fit. However, they could have left the tube off the receiver valve. Let's take them out and see."

REMOVE THE RECEIVER VALVE

Some of the refrigerant had to be pumped back into the 20 lb. cylinder and the rest into another empty cylinder. The Receiver Valve was sweated into the receiver and, therefore, had to be heated while it was being unscrewed. (The service men used a Prestolite torch with a small flame directed downward to the soldered joint, and in addition, wrapped a wet cloth around the upper part of the valve so as to prevent damage to the packing in the valve).

Sure enough, when removed, the Receiver Valve was found to have no tube on it. This explained why the receiver had to be full of liquid "Freon," and some more besides up in the condenser, before solid liquid could be fed into the liquid line.

"Just for curiosity," said one of them, "let's take the condenser valve out."

VALVES SWITCHED IN FACTORY

They did so and it had the tube on it. What had happened apparently, was that the workman in the factory had somehow switched the two valves, putting the valve without the tube in for the Receiver Valve and the one with the tube in for the Condenser Valve.

The valves were alike in every respect, except that a short length of 1/2 in. tube was soldered on one. It was something an inspector wouldn't catch unless he happened to be watching the solderer at the time. Also it would not show up as a stock shortage or overage for both valves were used.

It took only a few seconds to make the mistake, but it cost the field men several extra hours of work. They were fortunate in this case for the installation was in a new store that had not as yet opened, and was not a job that had to be rushed through to handle perishable foods on hand.

Despite all the care used, the elaborate inspections and tests by the factories to prevent defects and keep the quality of their products as near perfection as possible, something occasionally "gets by."

Factories want such things reported to them, along with the model and serial number of the equipment so that they can trace it back to the individual responsible. It is sometimes possible to make changes or improvements in the production methods or inspection technique.



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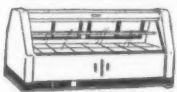
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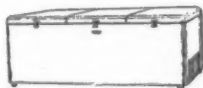
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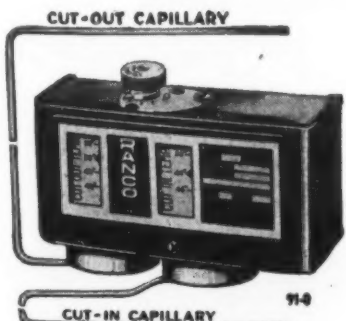
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COLUMBUS 1, OHIO

Battle Creek (Pop. 45,000) Firm Finds Active Market for Air Conditioning

Area Buys \$45,000 in McLarty Custom-Built Systems in Year

By John Sweet

BATTLE CREEK, Mich.—A visitor to this southwestern Michigan city could walk into 30 or more of the air conditioned buildings on "the main drag" and find installations engineered and installed by Gordon McLarty, owner of McLarty Systems here.

If this visitor went looking for all the air conditioned structures within a 30-mile radius of Battle Creek, he could discover more than 100 McLarty systems.

Mr. McLarty is a University of Michigan graduate engineer who has operated his own firm for the past 12 years, less time out for war production work. He has a background of 23 years' experience in the refrigeration and heating fields.

Since termination of the war, the company has filled \$45,000 worth of orders. Although "the cream" of the market is now gone, Mr. McLarty nevertheless confidently expects his volume of business to continue upward.

The firm's most recent installations, not long completed, includes a 30-ton job for Jacobson's Stores, Inc., a three-story women's apparel shop;

a 6-ton system in Preston Shoes, a one-story store; and an 8-ton job for the new offices of the Miller Dog Food Co. In these systems, as in all Mr. McLarty's "best" systems, the return and outside air mixture is first precooled with 57° F. city water (well water is employed in some other installations).

"By precooling," Mr. McLarty explained, "we can greatly increase the tonnage per horsepower and thus offer an attractive first cost, as well as lower operating cost." With this system, he added, 5 hp. develops approximately 10 tons.

CARRIER SURPLUS PARTS

Carrier Corp. provided 90% of the equipment used in the three latest installations, according to Mr. McLarty, who said the corporation "has been letting us have surplus parts and equipment so we can build them over into tailor-made jobs."

The company is now at work on a 100% well water "on tap" system that will air condition a building housing seven stores on the ground floor and 30 offices on the second floor. This project will be compar-

able to Mr. McLarty's largest installation, a system that has been in operation in the 70-apartment Kellogg Inn since 1937.

"This system (in the Kellogg Inn) uses 100% outside air with 'on tap' control in each apartment," Mr. McLarty recalled. "The 40,000 c.f.m. of air is cooled and dehumidified with 200 g.p.m. of well water at 52°."

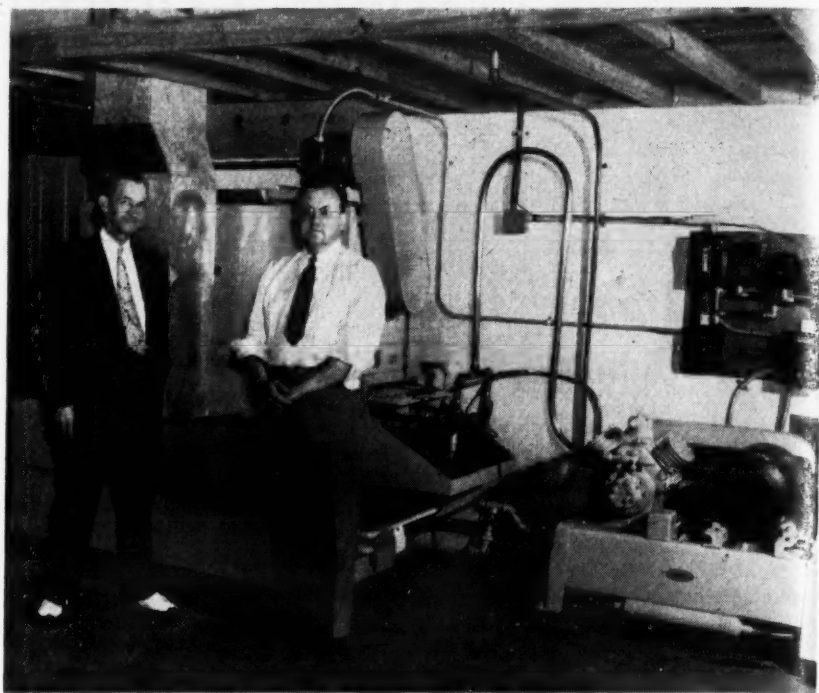
He said the building now being conditioned will use 150 g.p.m. of water at an expected temperature of 52-54°. A penthouse on the roof will contain the machine.

Our mythical visitor might pause to wonder, "how come" McLarty Systems has done so well by itself in a city of about 45,000 population. For one thing, Mr. McLarty would tell him, Battle Creek is located roughly midway between Detroit and Chicago, a fact which tends to discourage competition from these metropolitan centers—primarily because of the service angle.

Supplementing its business in summer cooling with refrigeration, the firm builds for local distribution a lower price line of city and well water air coolers. It also assembles exhaust fans and other similar products.

During the fall and early winter, its business consists almost entirely of commercial and residential heating with oil or coal. Sales are made, too, on some commercial refrigeration of the larger variety, and the concern

Equipment for Office Installation



Paul F. Ricketts (left), owner of Miller Dog Food Co., Battle Creek, Mich., stands in front of an 8-ton Carrier air conditioning unit installed in his new office quarters by Gordon McLarty (right), owner of McLarty Systems in the same city. About 30% outside air is brought in through a duct (directly behind Mr. Ricketts), mixed with returned air in filter box below duct, and pre-cooled by city water before going over refrigeration coils. Pipes (lower center) carry water to pre-cooler, then to 5-hp. condensing unit, thence to roof sprays. Conditioned air is expelled to four zones.

handles the usual line of units and equipment.

Basically, Mr. McLarty said, his "best" systems operate like this:

"The outside air pipe enters the filter box where the air is mixed with returned air from the room. The mixture (of which about 30% is outside air) then is pre-cooled by city water in a coil directly under the direct expansion coil.

"Instead of running city water directly to the compressor, we first run it through four rows of high velocity coil placed in the air stream of the returned and outside air. This brings the air mixture down to about 64°."

"The air then goes through the refrigeration coil which further reduces it to 54° or more to suit conditions in the building."

Aim of the company, it was pointed out, is to produce an outlet air temperature of about 54° in warm, humid weather in order to give store conditions of 78° temperature and 50% relative humidity at most times. These—or 80° with 50%—are the recommended figures.

It was explained that the 57° city water comes out of the precooling section at about 70° and out of the condensing unit at about 85°. It

then is carried to roof sprays whenever possible because "we find that a good saving in tonnage requirements results."

"Dehydrators are mounted permanently on the liquid line at the coil," Mr. McLarty continued. "The air circulating system is governed by one low-voltage switch at the thermostat, which is directly connected to the compressor."

"Air volume and compressor speed are adjusted to get maximum dehumidification and minimum rehumidification."

As for air distribution, Mr. McLarty's practice is to employ round iron pipe whenever possible and when it will not be visible. His reasons:

"They permit a more efficient air passage than rectangular pipes. They are cheaper and easier to install. They are flexible in that they can be changed very easily if the store rearranges its departments."

The installation in the Jacobson's Stores building includes three units which develop 30 tons of cooling with a total of 13 hp. A 5-hp. unit on the third floor produces about 13 tons, a 3-hp. machine on one side of the second floor develops approximately 7 tons for the ground floor and part of the second floor, and another 5-hp. unit on the opposite side of the second floor develops about 10 tons to condition that area.

To condition Preston Shoes' 20 x 100 ft. store, Mr. McLarty used a 3-hp. condensing unit to develop 6 tons. Three ducts empty into the store proper and one into the manager's office at the rear.

On the day this installation was examined, the outlet temperature stood at 52° and the relative humidity in the manager's office was 45%.

One of the problems on this job was to afford desired warmth for a bookkeeper in cooler weather, while still maintaining the lower temperature found most suitable for the clerks. Mr. McLarty's solution was to close off the bookkeeper's office and provide a radiator for use when necessary.

With regard to this, Mr. McLarty said:

"We've found that our customers use air conditioning early in the spring and late in the fall as people coming in off a 65° street with their topcoats on enjoy 65° temperature in the store, and the clerks in these

(Concluded on next page)

A FILTERING ELEMENT IS NOT ONLY DESIRABLE BUT IMPERATIVE IN AN EFFICIENTLY OPERATING DEHYDRATOR

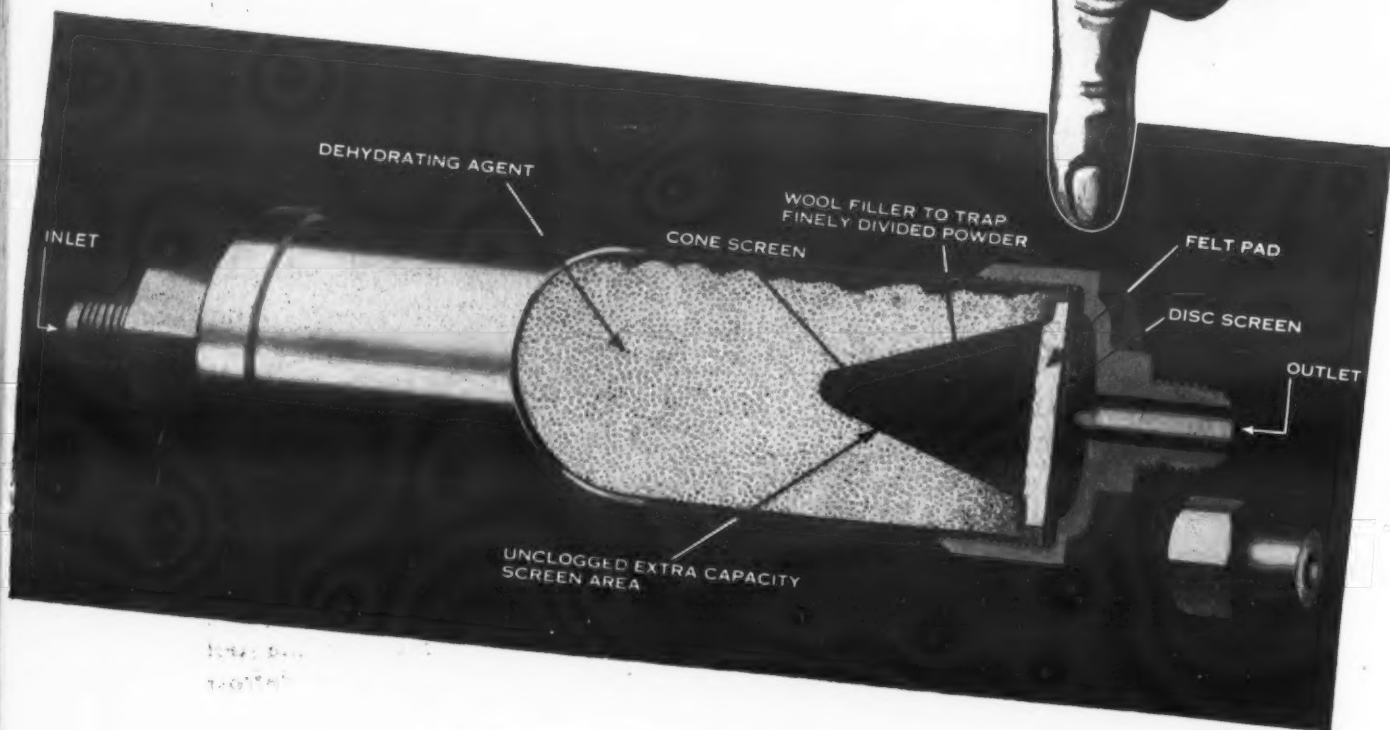
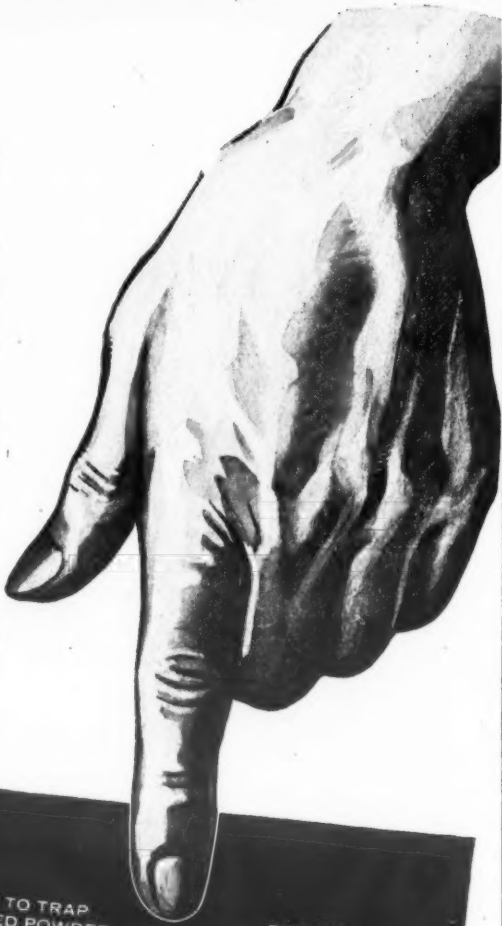
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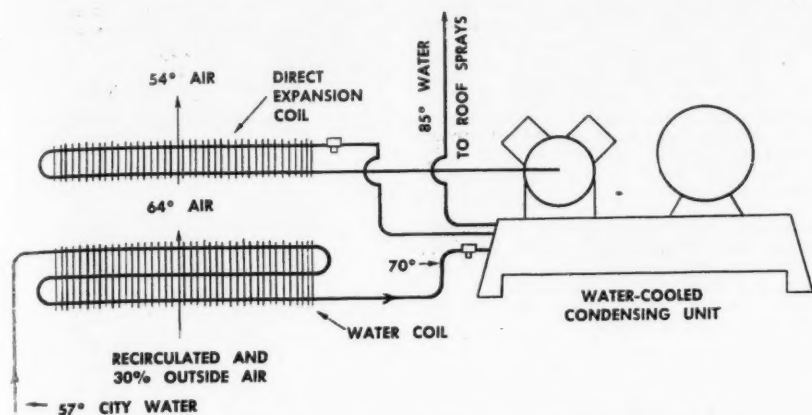
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Water-Cooled Air System



The diagram above shows how a typical McLarty water-cooled air system operates. Air is first cooled by incoming city water and then further reduced in temperature by passing through the direct expansion coil.

Standardized Parts Repair, Versatile Shop Men Ease Servicing Kinks, Says McLarty

(Concluded from Page 20, Column 5) busy times like to work at that temperature."

This particular installation is used for both cooling and heating. In the winter, steam at 5 lbs. pressure is put through the water coil.

"Humidification is accomplished," Mr. McLarty said, "by introducing a steam jet into the air stream. Not much above 25% relative humidity can be carried in cold weather as the glasses of people coming in out of the cold air steam up."

The two large rooms and the two small ones which comprise Miller Dog Food Co.'s new offices are cooled by a 5-hp. unit developing 8 tons. Miller's old building across the street also is conditioned by a McLarty system, installed some time ago, in which the heating ducts are used for air distribution.

Mr. McLarty describes himself as "an ardent booster for simplified air conditioning practice." In explanation, he offered these suggestions:

"1. More extensive use of round, iron pipe for flexibility, low cost, and efficiency in distributing air.

"2. Manufacturers can help the service man by supplying controls that are easy to adjust without a magnifying glass or special wrench. Do not solder expansion valves on.

"Use standard parts so far as possible. If it is a standard part, call it by its well known name as well as Part No. 000, if you must.

EASY SERVICING VITAL

"Why not install liquid sight glasses, strainers, and dryers at the factory on your package units? A good piece of equipment should be easy to service by any good service man. Each control on a package unit should be plainly marked with factory recommended settings for pressures or temperatures.

"3. More extensive use of soft copper tubing and bending tools to eliminate as many solder joints as possible."

"The plumbing industry," he continued, "has much to contribute to the refrigeration industry and vice versa. And the heating industry, with its standard low priced grilles and round pipe, has much to contribute to the cooling industry."

Another of Mr. McLarty's beliefs is that the specialists should be familiar with, and fairly good at, other air conditioning trades beside his own.

"In a small organization this helps in keeping men interested, busy, and happy, and brings out talent that can benefit both employer and employee," he said. "For instance, we hired a man who was a dandy sheet metal man and now he is a good arc welder, silver solderer, or pipe fitter if need be. We also hired a refrigeration service man and now he is also a good motor man, electrician, sheet metal man, rigger, or painter, if need be."

VARIED BACKGROUND

Four service and installation men are employed by the concern.

The experience on which Mr. McLarty bases these opinions includes—in addition to that with his own firm—time spent with Rochester Gas & Electric, as manager of the commercial refrigeration department; with Servel and Time-O-Stat Controls, as a sales engineer; with Westinghouse, as a development engineer at the Springfield plant; and with General Electric's Detroit distributor as a sales engineer.

As for the price situation, Mr. McLarty said that although he is trying to maintain the usual profit margins, jobs now cost much more due to the necessity of placing orders with several suppliers "in the hope of getting something," and there is lost motion in all departments.

He is skeptical about veterans entering their own air conditioning business. "It's too hard right now," he cautioned.

Kelvinator Reports Profit for Quarter

DETROIT—A profit before taxes of \$2,011,527 for the quarter ended June 30, 1946, leaving net profit of \$1,274,527 after reservation of \$737,000 for taxes, has been reported by Nash-Kelvinator Corp. This compares with net profit after taxes of \$412,260 for the June quarter of 1945.

Figures for the first nine months of the current fiscal year show loss of \$517,106 after tax adjustments.

According to the company statement, existing shortages and the restricted flow of materials undoubtedly will continue to hamper production during the September quarter. While this period should show an increase over the June quarter, the anticipated output will still be below the volume which should under normal conditions be secured from existing manufacturing facilities.

Crider Plans--

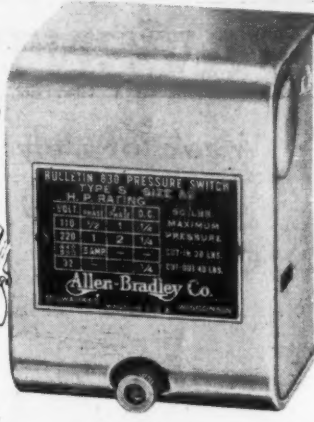
(Concluded from Page 1, Column 4) ager for Puro Filter Corp.

The company will produce "Saturn" compressors in the following capacities: single-stage 1/2 and 3/4-hp. "Freon-12" models, and a two-stage 1/2-hp. compressor that will handle "F-12" or "F-22," Mr. Crider said. Production as planned will begin at about 500 units a month.

Three more compressors are planned for production in 1947, including two 1/2 and 3/4-hp. single-stage units, and a 1/2-hp. two-stage unit for "F-12" and "F-22."

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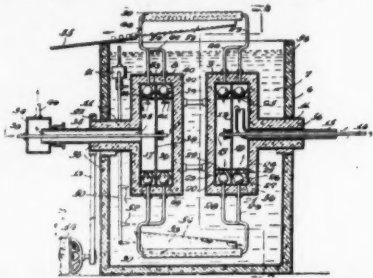


ICE AIR CONDITIONING CO., INC.
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PATENTS

Week of July 2
(Continued)

2,403,275. **REFRIGERATING APPARATUS.** Thomas B. Gilliam, Washington, D. C. Application Dec. 21, 1943, Serial No. 515,129. 13 Claims. (Cl. 62-2.)

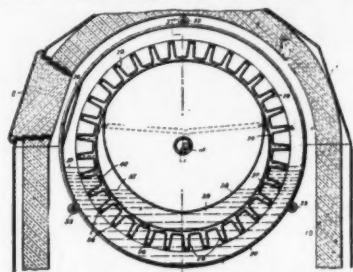


1. In an apparatus of the character described, a series of hollow molds each having a compartment in which a liquid is to be frozen, means for moving the molds into and out of the liquid, means for passing a refrigerant through the molds while the compartments thereof are submerged in the liquid, means for passing a heating fluid through the molds when they are in position above the liquid, and valve means movable with the molds and controlled by movement of the mold moving means, for controlling the refrigerant passing means and the heating fluid passing means.

2,403,406. **ICE CUBE MANUFACTURING APPARATUS.** Arthur D. Smith, Canton, Ohio, assignor to Barium Steel Corp., Canton, Ohio, a corporation of Delaware. Application Sept. 12, 1944, Serial No. 553,735. 16 Claims. (Cl. 62-106.)

1. An apparatus for freezing ice cubes, comprising a water jacket for containing water to be frozen, a hollow drum rotatable within said water jacket, ice cube molds arranged in the periphery

of the drum, an evaporator comprising a cylinder located within the drum and forming a brine chamber between the exterior of said cylinder and the interior



of the drum, an evaporator chamber formed in the lower portion of said cylinder, means for introducing a refrigerant fluid into the refrigerant chamber, means for introducing brine into the brine chamber and means for rotating the drum.

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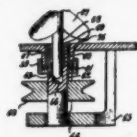
Pat. 2,394,109. **COOLING APPARATUS.** Patented Feb. 5, 1946. Fan to circulate air past the cooling apparatus of an air conditioning system is driven by the refrigerant as it passes through the refrigerating cycle instead of by a motor which would introduce additional heat to be absorbed by the system. Various modifications are shown one in which the liquid refrigerant from condenser is led to an inlet to be discharged through a nozzle against cups formed on impeller wheel, the impact causing the wheel to turn. (Owner) Andrew Sanchez, 2183 Amsterdam Ave., New York, N. Y. (Group 35-84. Reg. No. 2,965.)

Week of July 9

2,403,526. **DISHWASHING MACHINE.** William Norris Harris, Atlanta, Ga. Application Oct. 6, 1941, Serial No. 413,885. 1 Claim. (Cl. 134-115.)

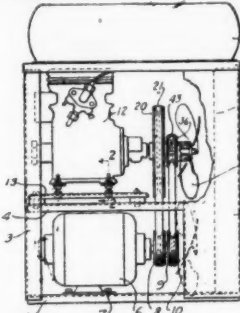
A device of the class described for a sink having an opening and an exterior projecting portion about said opening, and a bracket on the exterior of said sink, the

device comprising a shaft adapted to be journaled in said opening and said bracket, packing around the shaft at the outer end of said portion, a cap about said shaft for engaging said portion and enclosing said packing, said shaft in the top thereof having an axially extending



recess to selectively receive attaching means of a propeller or attaching means of a closure, and operating means for said shaft between said cap and bracket.

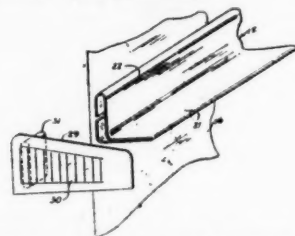
2,403,528. **REFRIGERATING APPARATUS.** William Walker Higham, Marion, Ohio, assignor, by mesne assignments, to International Detrola Corp., Elkhart, Ind., a corporation of Indiana. Application June 7, 1944, Serial No. 539,133. 3 Claims. (Cl. 62-115.)



1. A refrigerating apparatus comprising, a frame, a condenser, along one side of the frame and extending substantially from the bottom to the top thereof, a motor and a compressor, one of which is mounted in the lower portion of the frame and the other of which is mounted in the upper portion of the frame, the motor having the shaft projecting toward the condenser, a plural pulley on the motor shaft, a fan on the motor shaft positioned adjacent the condenser, the compressor having a shaft projecting toward the condenser, a pulley on the compressor shaft, a spindle carried by and

concentric with the condenser shaft, a pulley journaled on said spindle, a fan carried by the last named pulley and positioned adjacent the condenser, belts operating over the plural pulley on the motor shaft and over the pulley on the spindle for driving the compressor shaft and the pulley on the spindle at different speeds of rotation, the combined diameters of the two fans substantially corresponding to the vertical dimension of the condenser and the diameter of each fan substantially corresponding to the horizontal dimension of the condenser.

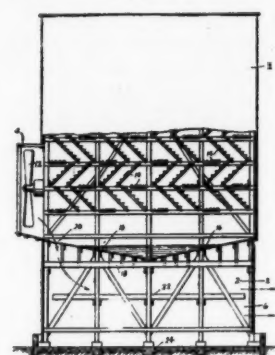
2,403,588. **REFRIGERATOR CABINET.** Earl D. Drake, Greenville, Mich., assignor to Gibson Refrigerator Co., Greenville, Mich., a corporation of Michigan. Application Dec. 23, 1944, Serial No. 569,454. 4 Claims. (Cl. 248-248.)



1. In a cabinet, an upright wall, a horizontally elongated shelf support comprising a generally tubular attaching portion having a longitudinal slot therein defined by parallel substantially coplanar flanges juxtaposed to said wall, and fastening means attaching said shelf support to said wall, said fastening means comprising a fastener having a head in said hollow portion and a shank extending outwardly through said slot and secured to said wall, the head of said fastener

resiliently engaging the inner surfaces of said flanges.

2,403,841. **FORCED DRAFT COOLING TOWER.** John B. Baird, Houston, Tex., assignor to Hudson Engineering Corp., Houston, Tex., a corporation of Texas. Application April 23, 1945, Serial No. 589,739. 3 Claims. (Cl. 261-30.)



1. A cooling tower and coil shed combination including a housing, an air intake fan at one side thereof, a tower exhaust port in said housing remote from said fan, a coil shed exhaust port in said housing also remote from the said fan, a water collecting tray separating the upper cooling tower portion of said housing from the lower coil shed portion thereof, and cooling coils beneath the said collecting tray, the said tray having an opening therethrough at a point close to the said intake fan, said opening being so positioned and of such size as to by-pass a material portion of the air stream from said fan onto the subjacent coils.

(To Be Continued)

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PAYMENT in advance is required for advertising in this column.

POSITIONS WANTED

POSITION WANTED: Refrigeration service mechanic, age 37, married, wants traveling sales position with refrigeration parts concern, preferably on west coast. Have own car. Would also consider service position with west coast firm. Box 2052, Air Conditioning & Refrigeration News.

REFRIGERATION AND Air Conditioning Service and installation man desires permanent connections with some progressive firm. Capable of heading service department, including complete electric shop. Am familiar with heat pumps. Fifteen years experience. Age 35. Absolutely dependable. Box 2054, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

One of the MOST PROGRESSIVE and fastest growing organizations in the industry wants commercial refrigeration service-installation men of such high qualifications that they will justify journeymen's pay plus. The industry's finest working conditions. Include complete personal data in first letter. TUDOR-PERFECOLD, INC., 1940 S. Main St., Los Angeles 7, Calif.

SERVICE MANAGER by San Antonio, Tex. Wholesale distributor of household appliances. Man with experience on electric and gas appliances, particularly electric refrigerators. Capable of handling correspondence and other duties courteously and efficiently. Good base pay and monthly bonus on volume. Our employees know of this opening, hence, give full details in reply. Box 2050, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

U. S. NAVY Cold Storage Warehouses, unused, in original crates, approx. 94 x 13 x 7'6" high. Steel clad inside and out, 5 1/2 inches insulation. Sectional construction permits dividing into smaller boxes. Also large assortment Used Frigidaire WX and DX Coils, excellent condition. All priced right, immediate delivery. COMMERFORD'S, 3674 Whittier Blvd., Los Angeles 23, Calif.

IMMEDIATE DELIVERY, new air conditioning Weathermakers complete with motor, "Freon" coil, expansion valve, drives, filter, etc., 10-25 ton capacity; centrifugal blowers SWSI and DWDI, propeller fans, heating and cooling coils, evaporator condensers. CONTROLTEMP EQUIPMENT SALES CO., 236 Butler St., Brooklyn 17, N. Y.

FOR SALE: 10,000 new aluminum ice cube trays in three popular sizes. Also air-cooled and water-cooled remanufactured condensing units 1/4 up to 2 hp. Write for particulars. EDISON COOLING CORP., 310 E. 149th St., Bronx 51, N. Y.

IMMEDIATE DELIVERY 20 cu. ft. all-steel glass top Freezers: upright glass top or open, with superstructure; Ice Cream, Frozen Food open and closed cabinets; Reach-ins, Wood and Metal Storage Boxes; all glass Sliding Door Dairy Refrigerators; Beverage Coolers; Air Conditioning Units; Motors 5-20 hp., etc. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16, N. Y. Main 2-9093.

COLDSPOT AND BOHN replacement compressor blades. Adaptable to all models. Available in three popular sizes—1-1/4", 1-1/2", 1-3/4". Packed four blades to a set. Price \$1 per set. (Four sets 90¢ each.) (Ten sets 80¢ each.) HOLL-INES DIST. CO., 7 E. Madison Ave., Dumont, N. J.

COLDSPOT AND BOHN replacement check valves. Fits all direct drive models. Guaranteed leak proof. Self-centering design. No cutting or flaring necessary.

Will not chatter. Price \$2.50 per set. (Four sets \$2.25 each.) (Ten sets \$2.05 each.) HOLL-INES DIST. CO., 7 E. Madison Ave., Dumont, N. J.

HOLL-INES SEALING CAPS designed exclusively for Crosley sealed unit terminal leaks. Installed in less than 10 minutes without opening the dome. No special tools necessary. Leak proof guarantee. Price \$4.50 per set of three caps. Ask your jobber or order direct. HOLL-INES DIST. CO., 7 E. Madison Ave., Dumont, N. J.

NEW TEMPRITE Room Air Conditioners Suitable for office or small store. Rating—2.5 tons or 32,000 B.T.U. per hour. Self-contained, water-cooled condensing unit, and all operating controls, 220 V. Single or three phase operation. Price each \$775, discount for quantity. Immediate delivery. INTERSTATE APPLIANCE CO., INC., 600 Broadway, New York, N. Y., Walker 5-2755.

SEALED CROSLLEY TERMINALS. Installed from the outside in a few minutes without opening the compressor. Corrects leaky terminals on all Crosley "F-12" units. Set of three \$6.75 (Part No. 1020). Installation tool \$1.65. Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

FRIGIDAIRE METER-MISER Terminals. Installed from the inside. Fits compressors with bottom-mounted terminals. (Part No. 1060.) Set of three \$2.55. WESTINGHOUSE TERMINALS. Installed from the inside. (Part No. 1030.) Set of three \$2.55. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

NORGE CHECK VALVES. For open-type units. (Part No. 1040). \$2.55 each. SEALED NORGE terminal packing washers. For repairing leaky terminals. Installed from the outside in a few minutes. (Part No. 1050). Three sets (9 washers) \$1.00. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

Manufacturers of ESKIMO FREEZERS. Immediate delivery. Ice cream cabinets—4, 6, 8, 10, 12 cubic ft. Farm freezers—12, 16, 20 cu. ft. Also sliding glass door cabinets equipped with compressor unit less motor. Beverage coolers, 6 and 8 ft. WILSON FREEZERS, INC., 837 Tilden St., Bronx, N. Y.

EQUIPMENT WANTED

ONE to three H.P. Air Cooled Cooper Condensers. McLARTY SYSTEMS, 205 West Michigan Ave., Battle Creek, Mich.

BUSINESS FOR SALE

GOING COMMERCIAL Refrigeration Sales and Service: Shop, Equipment, Living quarters, Truck, Merchandise, Good Will, Worth \$10,000. Walk out for \$8,500. (Good Returns) Any Part Optional. If you have a little money and some ambition can be financed. Write, Wire, Phone, DELTA REFRIGERATION SERVICE, Greenwood, Miss.

FOR SALE: Commercial Refrigeration Service Company. Good Business \$20,000. Large stock of units & etc. Long established. Distributor for well known units. Can get enough units if necessary. Good reason for selling. Retiring. Box 2051, Air Conditioning & Refrigeration News.

FRANCHISE WANTED

LINES WANTED. By Manufacturers Agent covering southwestern States. Calling on Wholesalers, Parts Houses, Retailers, Chains, Department Stores; Service, Commercial and Industrial users. Offering thorough, aggressive, experienced, high type and completely reliable representation. Box 2053, Air Conditioning & Refrigeration News.

REWARD

\$25 REWARD offered for information as to the whereabouts of Harold Graham alias Ray Morrison, wanted for bad checks. This man is operating in the middle west and is an A-1 refrigeration mechanic. Send information to Box 2055, Air Conditioning & Refrigeration News.

3 Important Dates!

SEPT.
30

OCT.
28

OCT. 29-
NOV. 1

SPECIAL
PRE-EXPOSITION
Issue of the
NEWS
SPECIAL
EXPOSITION
Issue of the
NEWS
REFRIGERATION AND AIR CONDITIONING EXPOSITION
CLEVELAND, OHIO—First All-Industry Exposition since 1941

AIR CONDITIONING & REFRIGERATION NEWS, every week in the year, is your best medium to convincingly contact the refrigeration and air conditioning industry. With the All-Industry Exposition not far away, two special issues of the NEWS are in preparation to give you the most profitable and effective advertising medium ever offered to the industry.

In the interest of the biggest show of the year, the NEWS will carry the complete story in two big special issues . . . the Pre-Exposition Issue—September 30 and the Exposition Issue—October 28.

27,000 COPIES

The Pre-Exposition Issue, September 30, will be the preview and program for the industry's biggest show. In addition to the regular 17,000 circulation, this issue will be distributed among 10,000 selected non-subscribers. Thousands will use this issue to plan their activities at the show ahead of time.

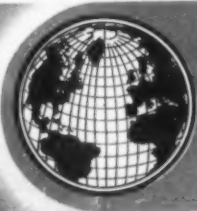
PRE-EXPOSITION ISSUE—SEPTEMBER 30
(Forms close Sept. 20)

TIMELY!

The Exposition Issue date, October 28, will be the day before the Exposition opening. The last-minute show information in complete form will be in this issue. Thousands of copies will be distributed from the NEWS' booth, No. 507. Your advertisement in this Exposition Issue will be "at the front" . . . it will be read by nearly everybody at the show.

EXPOSITION ISSUE—OCTOBER 28
(Forms close Oct. 18)

Put Your story up front! Hit the Show Target Dead Center! Bonus Circulation at No Increase in Advertising Rates . . . Reserve Your Space Today.



AIR CONDITIONING AND REFRIGERATION News

BUSINESS NEWS PUBLISHING COMPANY • 450 W. FORT ST., DETROIT 26, MICHIGAN



Goodrich Produces First All-Rubber Cabinet Lid

AKRON, Ohio—The first cold cabinet lid made entirely of rubber has been announced by the B. F. Goodrich Co. here.

The streamlined lid, which the manufacturer says will not break or permanently bend, features a fabric reinforced rubber hinge. Because the hinge is solid, melted ice cream or other liquids cannot seep into the cabinet, the company claims.

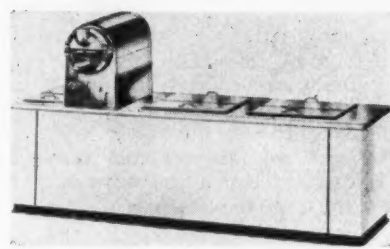
Declaring that the hinge cannot be

sprung even by severe abuse, the manufacturer said that in laboratory tests, it withstood 750,000 flexures (approximately five years normal service) without showing any appreciable change in strength.

Made of a special black compound, the lid is said to combine the rigidity of hard with the shock-proof properties of soft rubber and to remain permanently elastic. It will not soften or become lumpy with age, and the corners will not break, specifications indicated.

It is unaffected by moisture and will not become tacky in the warmest weather, the manufacturer claims. It will not warp, jam, or stick in the cabinet, he adds.

Its low heat conductivity provides high insulation properties while the concave rim maintains full contact at all points to prevent leakage. The rim contains no separate rubber strips.



Taylor Horizontal Model Freezes Up to 90 Gallons

BELOIT, Wis.—Introduction of its new 20-quart, horizontal freezer—Model 2060—was announced recently by Tekni-Craft here, manufacturer of Taylor freezers, ice cream cabinets, and dairy equipment.

Hardening capacity of the 1946 model was given as 60 gallons in cans or 90 gallons in packages. Storage space is provided for 20 gallons of mix.

According to the company, Model 2060 will freeze from 20 to 30 gallons of ice cream an hour and freeze and harden 60 gallons in 16 hours, when equipped with a 1½-hp. condensing unit. The condensing unit is not furnished.

Among the features listed for the freezer is the Taylor "Whirl Beater," consisting of two "whirl" rolls and six scraper blades, all said to be detachable without tools. The beater

may be operated on any of five speeds, Tekni-Craft said.

Another feature is a safety device called "Sigma-Vox," which, the company stated, "emits a clicking signal and releases the beater whenever the freezer is overloaded." Automatic control for keeping frozen malted or soft ice cream ready for immediate serving from the freezer is described as standard equipment.

Tekni-Craft said the cabinet is of Taylor "Ever-Seal Topless" construction, with cork insulation sealed against moisture, welded-steel assembly, heavy baked enamel sides, stainless steel cover, and rigid steel channel base.

The unit is 83 in. long, 31 in. wide, and 32½ in. high.

Temprite Line Covered In 40-Page Booklet

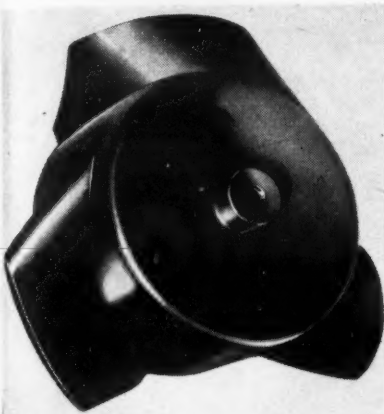
DETROIT—The complete line of refrigeration products made by Temprite Products Corp. here is illustrated and described in a new 40-page catalog just published by the company. In addition to specifications of the various items, the catalog contains considerable data on applications and load tables, and lists prices.

The instantaneous beer cooler is the featured item. Text and drawings explain the Temprite method of cooling which circulates beer through coils immersed in liquid refrigerant. The same principle is applied to the company's line of water coolers, soda fountain and beverage coolers, and is incorporated in the Temprite water cooler assemblies for photo-developing, which are described at some length.

Also listed in the catalog are "Oilrite" automatic oil separators, constant pressure two-temperature valves, equalizer tanks, accumulator-interchangers, and the combination high side float and liquid receiver, in addition to various accessories.

Berlet Opens Appliance Store In Casper, Wyoming

CASPER, Wyo.—The new Berlet Auto & Home Supply store owned by Walter H. Berlet has been opened at 128 North Center, with a full line of refrigerators, washing machines, and other home appliances, lawn mowers, and garden tools.



Evans Airfoil fan assembly.

Lighter Mobile Blower Uses 20% Less Current

DETROIT—Designed for installations requiring considerable air circulation but limited in fan space and power source, the Airfoil fan assembly manufactured by Evans Products Co. here is now being produced as an individual unit for use in mobile air conditioning, heating, and ventilating systems.

Previously, the assembly was manufactured exclusively as a component part of Evans' bus and truck heating and ventilating equipment.

The unit is described as "an axial flow fan molded from a heat and damage resistant thermo-setting plastic." It is said to incorporate a straight wing section in its design in accordance with modern aerodynamic principles.

According to Evans engineers, the fan uses 20% less current than previous fans to circulate the same amount of air against the same static pressure. Its weight is claimed to be 50% less than former fans, effecting a similar reduction in the load on motor bearings.

"Unlike previous fans, weight of the Airfoil fan is concentrated at the hub, creating less inertia for the fan motor to overcome in starting, and increasing life of commutators and brushes," the company asserts.

A. R. Lintern, manager of Evans' Thermo-Aire Division, said the fan can be used in a wide variety of air circulating systems, including those for motor vehicles, railroad cars, and street cars. The fans are available in sizes ranging from 2 to 14 in. in diameter.

Catalog on Products Published by Tenney

NEWARK, N. J.—Tenney Engineering Co. here has published a catalog describing its refrigeration products and providing engineering data relating to them.

The 20 page book, designated as Catalog CD46, contains information about Tenney unit coolers, Kwik-Freeze ice makers, Tenney coil and pan combinations, wall mounted panel units, bare tube coils, bunker type coils, coils for display cases, gravity coils, beer cooling coils, along with others.

Data found in the catalog include sizes and prices, coil selection tables, formulae for determining coil sizes, tables for determining air change load and heat leak load, factors for use in calculating loads, and product storage load data for various commodities usually placed in cold storage.

41 New Applications Listed In Chicago Seal Bulletin 646

CHICAGO—Forty-one new applications of Chicago Seal Co. products are listed in the firm's new Bulletin 646 just released. The eight page booklet also contains detailed specifications, illustrations, and list prices of the company's line of seals and valve plates.

Copies may be secured by writing the company at 20 North Wacker Drive, here.

Tonic for products requiring automatic temperature control

White-Rodgers Hydraulic-Action Temperature Control

White-Rodgers standard controls often solve those special applications on refrigeration jobs

If only because it costs more to use a "special" control where a standard White-Rodgers control will do the job as well, you owe it to yourself and your customers to investigate the complete White-Rodgers line of temperature and pressure controls.

So flexible are they in application and range, that often the same type of control will serve as well for a dozen different refrigeration or air-conditioning jobs. Besides, their high accuracy and complete dependability in operation makes them more economical to use. Once in operation, their reliability reduces service call-backs, further reducing your costs and making better-satisfied customers for you.

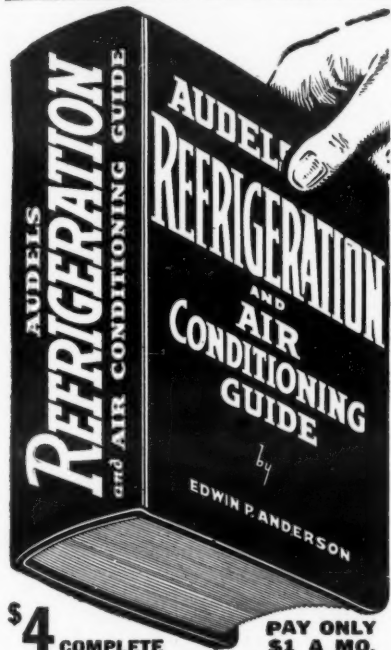
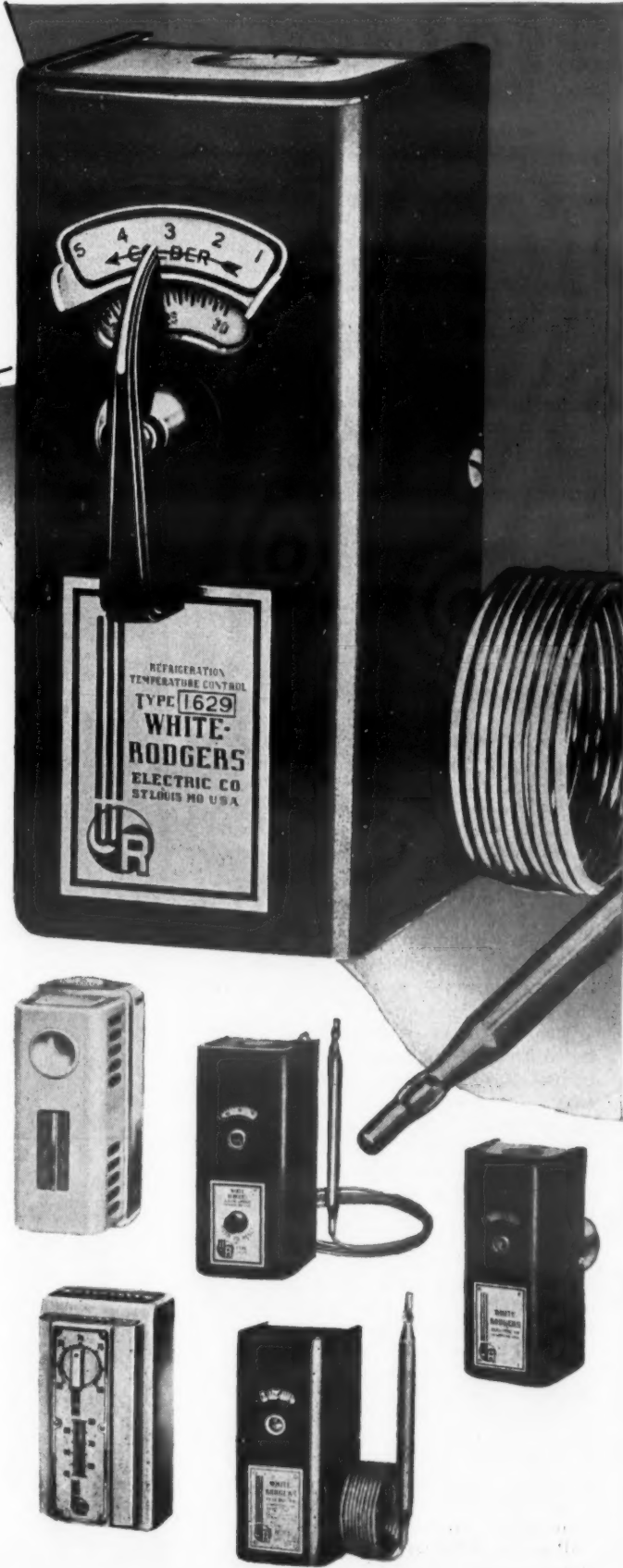
You save in all these ways when you standardize on White-Rodgers controls, as have leading manufacturers of refrigeration and air-conditioning equipment. Write today for refrigeration catalog and installation data.



WHITE-RODGERS ELECTRIC CO.

ST. LOUIS 6, MISSOURI

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AUDEL'S REFRIGERATION & AIR CONDITIONING GUIDE Answers Your Questions on Basic Principles, Servicing, Operation and Repair of Household Refrigeration—Special Refrigeration Units—Commercial and Industrial Refrigeration—Air Conditioning Systems—Over 1280 Pages, 46 Chapters, 700 Illustrations—Diagrams including data on Freon, Quick Freezing, Lockers and Water Coolers. A new timely book containing practical facts and figures for Better Service. Easy to understand and Handy Ready Reference.

Step up your own skill with the facts and figures of your trade. Audel's Mechanics Guides contain Practical Inside Trade Information in a handy form. Fully Illustrated and Easy to Understand. Highly Endorsed. Check the book you want for 7 days' Free Examination.

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Please send me postpaid for FREE EXAMINATION books marked (a), below. If I decide to keep them I agree to mail \$1 in 7 days on each book ordered and further \$1.50 monthly on each book until I have paid price. Otherwise, I will return them.

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- ☐ OIL BURNER GUIDE, 384 Pages. 1.
- ☐ POWER PLANT ENGINEERS Guide, 1500 Pages. 4.
- ☐ PUMPS, Hydraulics & Air Compressors, 1658 Pgs. 1.
- ☐ WELDERS GUIDE, 400 Pages. 1.
- ☐ BLUE PRINT READING, 416 Pages. 1.
- ☐ SHEET METAL WORKERS Handy Book, 388 Pgs. 1.
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- ☐ AIRCRAFT WORKER, 240 Pages. 1.
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- ☐ ELECTRIC LIBRARY, 12 vol., 7000 Pgs., \$1.50 vol.

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Address _____

Occupation _____

Employed by _____

Procedure Outlined For Industry-Wide Increases

WASHINGTON, D. C.—Going on record that OPA will not follow "filibuster" or delaying tactics against price increases, OPA Administrator Paul Porter on the other hand warned that OPA will be forced to follow the "letter of the law" in demanding full cost data before industry wide prices can be permitted.

Mr. Porter hit at "glib suggestions" of those offering "short-cut" methods for increasing prices, and said that "the law clearly defines the standards by which price adjustments are to be granted."

Following are some excerpts from Mr. Porter's statement on procedure for increasing prices on non-agricultural commodities:

"The OPA will continue of its own accord to make prompt price adjustments under the general earnings standards which are still authorized under the law. This means, for instance, that when an industry's earnings fall below the minimum set forth in the law (normal peacetime earnings of an industry) price increases will be allowed. OPA will also remove price controls from non-agricultural commodities which are not important to business or living costs and when supply and demand have come into balance, as required by the new statute."

"The law clearly defines the standards by which price adjustments are to be granted. Those standards will be the rule by which we will grant adjustments."

"It is important for those who have come forward with glib suggestions for a free-and-easy method of granting increases, to examine the law. OPA is not a free agent. Cost data must be supplied by industry, then analyzed by OPA."

"It would be as illegal for us to grant price increases as the result of collective bargaining as it would be for us to roll prices back as the result of collective bargaining. The law states specifically that industry advisory committees must provide cost and price figures to OPA, and that increases can be granted only after such data have been made available."

"Because there is so much misunderstanding on this point, it would be well to examine the law, which reads: 'Any industry advisory committee may apply to the administrator for the adjustment of the maximum prices applicable to any product in accordance with the standards set forth in this section, and shall present with the application comprehensive evidence with respect to costs and prices.'

"Obviously, you can't reach into a hat and pull out cost data for an entire industry. Such information can come only from industry itself. It won't be easy, I know, for industry to provide this information, but the law requires it and OPA must have it in order to grant legal adjustments."

"After comprehensive figures come in they will be carefully analyzed and legal adjustments granted as speedily as possible. Though the law gives a limit of 60 days, I am certain that if industry provides all necessary information, in a large number of cases results will be available before the 60-day dead-line."

"There can be no doubt that it will be difficult for some industries to collect the statistical material necessary. Congress recognized that OPA, on its own, could not assemble data for each industry rapidly enough to do an effective job. Therefore, it wisely placed a major share of this responsibility upon industry itself. Some industries may find that their books have not been set up properly to obtain the necessary breakdowns—some may find it necessary to hire additional accounting personnel."

We are determined to grant adjustments on a businesslike basis, and urge industry to present complete information when asking for adjustments. We do not intend to engage in collective bargaining. We intend to grant adjustments which will be based on the formula provided by Congress. That is, maximum prices will be established on the basis of the industry-wide 1940 average price of a product plus the industry-wide average cost increases since then."

"This formula is subject to limitations: (1) if the current price covers the total current costs plus the industry's over-all 1940 percentage ratio of profit to sales, no further increase would be required; or, (2)

if the industry cannot show that a substantial increase in production is practicable without reducing the output of another equally needed product, then the law does not require that an adjustment be given provided the product is realizing a reasonable profit."

"We are well aware of the fact that industry is worried about the words 'reasonable profit' which were written into the Act of Congress. Our staff has been working overtime drawing-up definitions which will clarify such phrases and spell out the procedures which must be followed by industry to obtain relief."

"These procedural regulations not only will outline methods of obtaining price adjustments, but will set up standards for relief, explain what is meant by 'substantial increase in

production' and 'reasonable profit'; set up a definition for 'representative sample'; and list in detail the kinds of data required and how they should be presented."

"Every effort has been made to draw up these procedural regulations so that they will be easily understood. Obviously, however, it is a complicated matter and not as simple as A,B,C. One thing must be pointed out—the law does not give OPA any real leeway and the procedural regulations are drawn up to conform with the statute."

"If industry believes that the accumulation and presentation of cost data will be a headache, let me assure industry that it will be as difficult for us to analyze the information as it was for industry to present it."

165 Sign for All-Industry Show--

(Concluded from Page 1, Column 3) with the show include the Refrigeration Service Engineers Society, the National Association of Refrigeration Contractors, and the Refrigeration Equipment Wholesalers Association, and the National Frozen Food Locker Association.

R.S.E.S. plans to hold its annual meeting before the exhibition, with tentative dates set at Oct. 25 through Oct. 29. With headquarters at the Hollenden hotel, the Society is arranging a party Oct. 26, and a banquet Oct. 28.

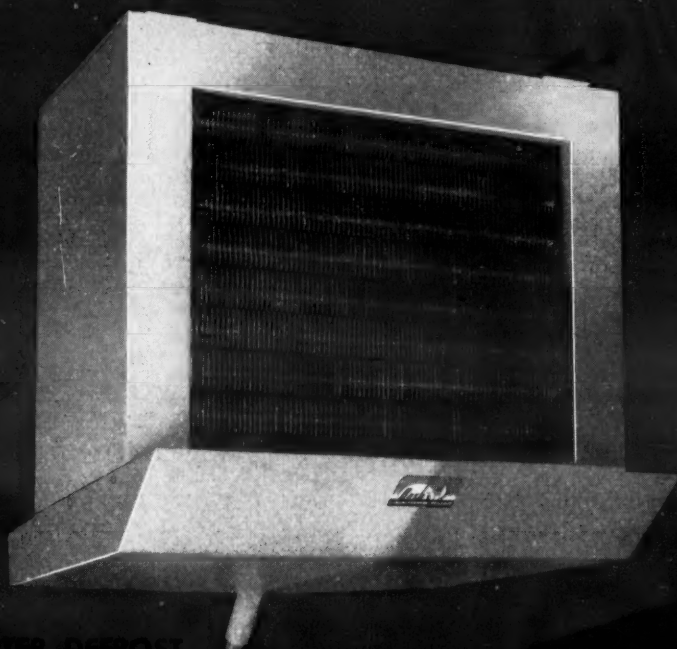
The Contractors' annual meeting is scheduled for Sunday and Monday, Oct. 27 and 28. Movies, speeches, skits, and panel discussion of indus-

try problems are on the fire. The Association's directors plan a session on Saturday before the meeting.

R.E.W.A., ensconced in the Hotel Statler, plans to hold a directors' meeting on Saturday, Oct. 26. The organization's manufacturers relations committee and trade relations committee will convene on Sunday. General association activities begin Monday with registration of members and a joint meeting with R.E.M.A. in the Cleveland Hotel. Addresses by the heads of both groups are planned.

On Tuesday the association has scheduled regional group meetings. A general meeting and luncheon for Wednesday, and a joint luncheon with R.E.M.A. are set for Thursday.

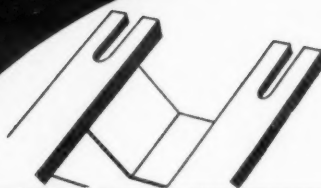
BUSH UNITS, ON PERFORMANCE RECORDS



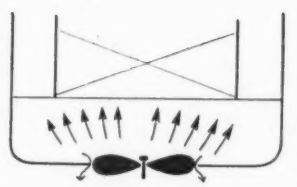
WATER DEFROST UNIT COOLER



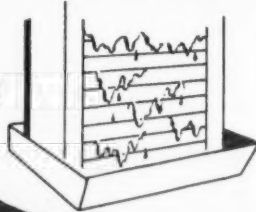
SLOTTED HANGERS
Permit greater ease of installation. Slip under lag bolts while other end is fastened.



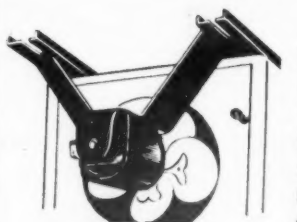
DEEP PLENUM CHAMBER
Designed to give maximum distribution of moving air through core.



DEFROSTS WITH TAP WATER.
Less than five minutes needed for complete defrosting.



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Light — yet strong and vibration proof. Assures smooth, quiet operation.

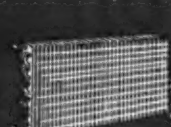


BUSH Units, on their performance record, are the most economical . . . dollar for dollar . . . that can be specified. These units are constructed sturdily with materials of highest quality to stand hard usage beyond the exacting demands of any refrigeration system. BUSH Units stand the test of time with an enviable record of dependable and trouble-free performance.

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